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# INDEX OF MINING ENGINEERING LITERATURE

COMPRISING AN  
INDEX OF MINING, METALLURGICAL, CIVIL, MECHANICAL,  
ELECTRICAL AND CHEMICAL ENGINEERING  
SUBJECTS AS RELATED TO MINING  
ENGINEERING

ALSO  
COSTS OF MINING AND METALLURGICAL  
OPERATIONS, ETC.

BY  
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STATE COLLEGE, AUTHOR OF "A TREATISE ON GOLD AND SILVER,"  
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*SECOND VOLUME*  
FIRST THOUSAND

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1912



## PREFACE TO SECOND VOLUME OF INDEX

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IN order that an index may be valuable it must be added to from time to time, including references to the new material in the current technical literature and annual proceedings of societies. To this end the Index of Mining Engineering Literature has been enlarged by the preparation of an additional volume covering the list of publications indexed for the first volume, besides a number of other publications. Still other publications would have been incorporated in this volume of the Index had they been available.

The two special features that distinguish this Index from others are cross-references and multiple references. By the former is meant the reference to other subjects under which information can be obtained relative to the special subject in question; and by the latter is meant the breaking up of a paper or article into a number of references which are distributed under appropriate headings.

The special feature of the present volume of the Index is the list of references on cost which are distributed over and cover practically every phase of mining and metallurgical practice. These references to costs are particularly interesting and valuable to the practicing engineer.

As was stated in the former volume of the Index, the work has been the result of the unaided labor of the author, and all errors are, therefore, due to his oversight.

WALTER R. CRANE.

SCHOOL OF MINES,  
THE PENNSYLVANIA STATE COLLEGE,  
June 1, 1912.





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## PUBLICATIONS INDEXED AND ABBREVIATIONS

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- Am Jour. Min. — American Journal of Mining.  
Coll. Engr — Colliery Engineer  
Coll Engr. & Met. Miner. — Colliery Engineer and Metal Miner.  
Engineering, London.  
E & M. J. — Engineering and Mining Journal.  
J C M. I. — Journal of the Canadian Mining Institute  
J. C. & M. Soc. S. A. — Journal of the Chemical and Metallurgical Society  
of South Africa.  
J. W. Soc. E. — Journal of the Western Society of Engineers.  
J M. Soc. N. S. — Journal of the Mining Society of Nova Scotia.  
Min. Mag. (old series). — Mining Magazine.  
Min Mag. (new series). — Mining Magazine.  
Min Mag., London. — Mining Magazine, London.  
M. & M. — Mines and Minerals.  
Min & Sci. Press. — Mining and Scientific Press.  
P. C. M. & M. Soc. S. A — Proceedings of the Chemical, Mining and Met-  
allurgical Society of South Africa  
P. E. Soc. W. Pa. — Proceedings of the Engineering Society of Western  
Pennsylvania.  
P. Soc. P. E. E. — Proceedings of the Society for the Promotion of Engi-  
neering Education.  
Sch. Mines Quart. — School of Mines Quarterly.  
T. A. I. M. E — Transactions of the American Institute of Mining Engineers.  
T Au I. M E. — Transactions of the Australian Institute of Mining  
Engineers  
T I M E. — Transactions of the Institution of Mining Engineers.  
T. I. M. & M. — Transactions of the Institute of Mining and Metallurgy.  
T L S. M. I. — Transactions of the Lake Superior Mining Institute  
T N. S. I. M. & M. E — Transactions of the North Staffordshire Institute  
of Mining and Mechanical Engineers.  
T. F. C. M. I. — Transactions of the Federated Canadian Mining Institute.  
U. S. G. S. Publications. — United States Geological Survey Publications,  
except Water Supply Papers.

### PUBLICATIONS INCOMPLETELY INDEXED

#### *Reports of Surveys, Proceedings of Societies, etc.*

- Ann. Min. Rept. N. S. Wales. — Annual Mining Report of New South  
Wales.  
Cal. Miners' Assoc. Ann. — California Miners' Association Annual.  
Columbia Engr. — Columbia Engineer.  
P. I. C. E — Proceedings of the Institute of Civil Engineers.

- Rept. Census Office, Mines and Quarries. — Report Census Office, Mines and Quarries.  
 Rept. Inspr. Mines Pa — Report of the Inspector of Mines of Pennsylvania.  
 Rept. Zinc Comm. Canada — Report of the Commission Appointed to Investigate the Zinc Resources of British Columbia, etc.  
 Second Geol. Sur. Pa — Second Geological Survey of Pennsylvania.  
 The Mines of the West. — Raymond.  
 The Univ. Geol. Surv. of Kans. — The University Geological Survey of Kansas.  
 Univ of Ill Bull. — University of Illinois Bulletin.  
 U. S. Bureau of Mines. — United States Bureau of Mines.

## JOURNALS

- Am Engr. & R R Jour — American Engineer and Railroad Journal.  
 Coll Guard. — Colliery Guardian, London.  
 Concrete and Constructional Engineering, London.  
 Electrochemical Industry  
 Eng. Mag. — Engineering Magazine.  
 Eng. News — Engineering News.  
 Eng -Cont. — Engineering Contracting.  
 Mining World.

## BOOKS

- Anthracite Coal Industry, Roberts  
 Aerial or Wire Rope Tramways, Willis-Taylor.  
 Coll. Working and Management, Bulman and Redymayne.  
 Diamond Drilling, Denny  
 Earthwork and Its Cost, Gillette.  
 Gold Min. & Mill. W. Aus. — Gold Mining and Milling Western Australia, Charleton.  
 Kents' Mech. Engrs. Pocket-Book — Kents' Mechanical Engineers' Pocket-Book.  
 Mech. Eng. of Coll. — Mechanical Engineering of Collieries, Futers.  
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 Miners Pocket-Book, Lock.  
 Ore Dressing, Richards.  
 P. C M. — Practical Coal Mining, Ed. W. S. Boulton.  
 R.R. Construction. — Railroad Construction, Webb.  
 Sci. Am. Supp. — Scientific American Supplement.  
 The Gold Mines of the Rand, Hatch and Chalmers.  
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COLLIERY DISASTERS. By F A. Hill. E. & M. J., vol. 86, p. 18. 2 columns.

See also COAL DUST AS AN EXPLOSIVE, MINE FIRES, AND MINE EXPLOSIONS.

MINE ACCIDENTS. By J. T. Quine. T. L. S. M. I., vol. 14, p. 71. 10½ pages.

MINE ACCIDENTS By S. Reynolds. M. & M., vol. 29, p. 412. 3 columns

ACCIDENTS IN STOPES. E & M. J., vol. 87, p. 300. ¼ column.

MINING ACCIDENTS IN CORNWALL. Min. Mag., London, vol 1, p. 119 6 columns. I.

ACCIDENTS IN THE COAL MINES OF GREAT BRITAIN. E & M. J., vol. 89, p. 975. 4 columns.

COAL-MINE ACCIDENTS IN GREAT BRITAIN. E. & M. J., vol. 89, p. 1029. 2 columns.

COAL-MINING ACCIDENTS IN 1907. M. & M., vol. 29, p. 326. ¼ column

METAL-MINING FATALITIES IN IDAHO, FOR 1910. M. & M., vol. 31, p. 700. 1 column.

COAL-MINE DISASTERS IN NORTH AMERICA FROM 1869 TO 1910. E & M. J., vol. 90, p. 949. Table

MINE-ACCIDENT INVESTIGATIONS. By G. S. Rice. M. & M., vol 31, p. 282. 6 columns.

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MINE ACCIDENTS AND THE BUREAU OF MINES. By G S Rice. Min & Sci. Press, vol. 101, p. 471. 5 columns.

See also BUREAU OF MINES under MINING.

ECONOMY AS RELATED TO MINE ACCIDENTS. By H. E. Coll. E. & M. J., vol. 87, p. 359. 8 columns.

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COAL TRUSTS AND SAFE MINING (?). By W. H. Reynolds. M. & M., vol. 31, p. 633. 5 columns

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## Loss of Life in Mining

DEATH FROM ACCIDENTS IN MINES. P. C. M. & M. Soc. S. A., vol 7, p. 171. 5 columns.

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**DATA ON MORTALITY AND MORBIDITY OF MINERS** By F. L. Hoffman. E & M. J., vol 89, p. 1321, 9½ columns; vol 90, p 23. 10 columns.

**COAL-MINING FATALITIES IN BELGIUM** By F L Hoffman E. & M. J., vol. 90, p 519 5½ columns. D

### Cause of Accidents

**COAL-MINE ACCIDENTS Their Causes and Prevention** By C. Hall and W. O. Snelling U. S. G. S., Bull. 333, 21 pages, 1907.

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**CAUSE OF MINE EXPLOSIONS.** By James Ashworth. Colliery Engineer, vol. 16, p. 127.

**INSTANTANEOUS OUTBURSTS OF GAS IN SHAFT SINKING.** E. & M. J., vol. 88, p 1271 1½ columns.

See also **OCCURRENCE OF GASES IN COAL MINES.**

**ACCIDENTS TO MULE DRIVERS.** M. & M., vol. 29, p. 288 ½ column.

**ACCIDENTS FROM THE DRAWING OF PROPS** E. & M. J., vol 87, p. 359. 1½ columns.

**FATALITIES FROM ROBBING PILLARS.** E. & M. J., vol. 87, p. 19. 2 columns.

See also **DRAWING OR ROBBING PILLARS.**

**ACCIDENTS FROM EXPLOSIVES.** T. L. S. M. I., vol. 14, p 75. 3 pages

**ACCIDENTS WITH EXPLOSIVES.** E. & M. J., vol 87, p 299. 1 column.

**ACCIDENTS FROM USE OF EXPLOSIVES.** By J. W Stark. M. & M., vol. 29, p. 381. 4½ columns.

**ACCIDENTS IN LOADING AND FIRING EXPLOSIVES** M. & M., vol. 29, p. 382 2 columns

See also **METHODS OF FIRING EXPLOSIVES AND TAMPING and TAMPING MATERIALS**

**EXPLOSIVES AND MINING ACCIDENTS.** T. Au. I M. E., vol. 9, p 31, 5 pages; p. 42 10 pages

**COMMON CAUSES OF ACCIDENTS FROM EXPLOSIVES IN MINES** By J R. Godfrey. T. Au. I M E, vol. 9, p 30. 32 pages.

**ACCIDENTS DUE TO FLAMING EXPLOSIVES** E. & M. J., vol. 87, p. 300 1 column

**ACCIDENTS CAUSED BY MISSED HOLES.** E. & M J., vol. 87, p. 299. 1 column.

See also **METHODS OF FIRING EXPLOSIVES.**

**ACCIDENTS IN TRANSPORTING EXPLOSIVES** M. & M., vol. 29, p. 381. 1½ columns

See also **HANDLING EXPLOSIVES.**

**ACCIDENTS IN STORING EXPLOSIVES.** M & M., vol. 29, p. 381. 1½ columns.

See also **BLASTING IN MINES AND EXPLOSIVES FOR MINING PURPOSES**

**DANGERS ATTENDING USE OF ELECTRICITY IN COAL MINES.** By J. Ashworth E & M. J., vol. 88, p. 123. 2½ columns.

**ELECTRIC SHOCKS AND FIRES IN MINES.** E & M. J., vol. 87, p. 317. 1½ columns.

**ELECTRIC SHOCKS IN MINES.** By I. F. Walker. M & M., vol. 31, p. 493, 3½ columns; p. 543, 3 columns; p. 637. 4 columns.

**DEATH FROM ELECTRIC SHOCK AT CLIFTON COLLIERY, ENGLAND.** By S. F. Walker. E & M. J., vol. 88, p. 779. 3 columns. I.

**AN ACCIDENT CAUSED BY AN ELECTRIC COAL CUTTER.** E & M. J., vol. 88, p. 452. 2 columns. I.

- CARELESSNESS WITH ELECTRICITY.** E. & M. J., vol. 90, p. 726.  $1\frac{1}{2}$  columns.
- SAFE USE OF ELECTRICITY IN GASEOUS MINES.** M. & M., vol. 31, p. 126. 1 column.
- See also **ELECTRICITY IN THE MINE.**
- PECULIAR MINE ACCIDENT.** A Fire Resulting from Substituting Crude Petroleum for Car Lubricating Oil. By J. Elliott. M. & M., vol. 29, p. 488.  $1\frac{1}{2}$  columns.
- DANGEROUS GASES CAUSING MINE ACCIDENTS.** T. A. I. M. E., vol. 9, p. 37. 2 pages.
- See also **MINE EXPLOSIONS AND MINE GASES.**
- CARELESSNESS IN MINING: Cause of Accidents** E. & M. J., vol. 89, p. 526.  $\frac{1}{2}$  column.
- CARELESSNESS IN MINES CAUSE OF ACCIDENTS.** M. & M., vol. 30, p. 355.  $\frac{1}{2}$  column.
- COAL-MINE ACCIDENTS ARE DUE TO VIOLATIONS OF MINE LAWS.** E. & M. J., vol. 88, p. 1176.  $1\frac{1}{2}$  columns.
- MINE ACCIDENTS DUE TO DISREGARD OF LAW.** E. & M. J., vol. 89, p. 578. 1 column.
- THE RESPONSIBILITY FOR RECENT COAL-MINE DISASTERS.** E. & M. J., vol. 85, p. 969.  $3\frac{1}{2}$  columns.
- ACCIDENTS DUE TO LAX DISCIPLINE.** E. & M. J., vol. 90, p. 1044.  $\frac{1}{2}$  column.
- See also **DISCIPLINE IN MINES.**
- Protection in Mining**
- COAL-MINE ACCIDENTS AND THEIR PREVENTION.** By J. A. Holmes. Min. & Sci. Press, vol. 100, p. 673. 3 columns.
- COAL-MINE ACCIDENTS AND THEIR PREVENTION.** By Dr. J. A. Holmes. Eng. News, Dec. 9, 1909.
- CAUSE AND PREVENTION OF EXPLOSIONS.** Colliery Guardian, vol. 59, p. 326.
- MINE-ACCIDENT PREVENTION.** By J. J. Rutledge. M. & M., vol. 31, p. 276.  $4\frac{1}{2}$  columns.
- A CHECK SYSTEM FOR GASEOUS MINES.** By O. Cartledge. M. & M., vol. 30, p. 331. 1 column.
- See also **MINE ATMOSPHERE AND GASES.**
- PRECAUTIONARY SUGGESTIONS TO ALABAMA COAL MINERS: Regarding Accidents.** E. & M. J., vol. 89, p. 478. 2 columns.
- PREVENTION OF ACCIDENTS.** M. & M., vol. 31, p. 412. 1 column.
- PREVENTION OF ACCIDENTS IN MINING.** T. L. S. M. I., vol. 14, p. 93. 1 page.
- PREVENTION OF ACCIDENTS IN METAL MINES.** By C. T. Rice. E. & M. J., vol. 87, p. 298.  $14\frac{1}{2}$  columns.
- PREVENTION OF MINE ACCIDENTS.** Min. & Sci. Press, vol. 97, p. 881.  $1\frac{1}{2}$  columns.
- THE PREVENTION OF ACCIDENTS IN COAL MINING** By E. H. Cox. E. & M. J., vol. 88, p. 410.  $9\frac{1}{2}$  columns.
- COAL-MINE ACCIDENTS AND THEIR PREVENTION.** By J. A. Holmes. E. & M. J., vol. 88, p. 1228.  $2\frac{1}{2}$  columns.
- PREVENTION OF COAL-MINE ACCIDENTS** M. & M., vol. 30, p. 308.  $5\frac{1}{2}$  columns.
- PREVENTION OF COAL-MINE ACCIDENTS.** By J. A. Holmes. M. & M., vol. 30, p. 329.  $1\frac{1}{2}$  columns.
- PREVENTION OF MINE ACCIDENTS.** By J. Mitchell. M. & M., vol. 30, p. 346.  $\frac{1}{2}$  column.
- THE PREVENTION OF MINE ACCIDENTS.** By R. H. Coulson. E. & M. J., vol. 90, p. 1043. 3 columns.
- PREVENTION OF MINE ACCIDENTS.** E. & M. J., vol. 86, p. 1088. 21 columns.
- ACCIDENTS: Preventative Measures.** P. C. M. & M. Soc. S. A., vol. 9, p. 247.  $1\frac{1}{2}$  columns.

**SAFETY MEASURES IN MINING.** By Donald Macaulay and L. G. Irvine. P. C. M. & M. Soc. S. A., vol. 6, p. 148, 17 columns; p. 197, 3 columns; p. 226, 4 columns; p. 251, 4 columns; p. 292, 32½ columns; p. 336, 5½ columns; p. 369, 1 column; vol. 7, p. 10, 3½ columns; p. 36, 15 columns; p. 76, 14 columns; p. 111, 18 columns; p. 159, 32 columns

**TO PREVENT BLOWN-OUT SHOTS.** P. C. M. & M. Soc. S. A., vol. 9, p. 319. 2 columns.

See also **BLASTING IN MINES**

**HOW EUROPEAN COLLIERIES ARE SAFEGUARDED.** E. & M. J., vol. 89, p. 829. 7½ columns.

**AUTOMATIC PROTECTIVE SWITCH GEAR FOR COLLIERY SERVICE.** By E. B. Wedmore. T. I. M. E., vol. 38, p. 416. 14 pages. I.

**THE BENNETT SAFETY GEAR.** By S. G. Bennett. T. I. M. E., vol. 38, p. 647. 6 pages. I.

**WHITE WASHING A COAL MINE.** By S. Reynolds. M. & M., vol. 30, p. 16. 2 columns

**LEVYING OF A FINE FOR EVERY FATAL ACCIDENT.** E. & M. J., vol. 87, p. 300. 1 column.

**TESTING ROOFS IN MINES.** P. C. M. & M. Soc. S. A., vol. 8, p. 48. ½ column.

See also **FALLS OF ROOF AND WALLS IN MINES.**

**GOOD TIMBERING AND DEATH RATE.** P. C. M. & M. Soc. S. A., vol. 8, p. 133. ½ column.

See also **MINE SUPPORT.**

**SAFE USE OF ELECTRICITY IN COAL MINING.** By G. R. Wood. E. & M. J., vol. 88, p. 19. 7½ columns.

**ELECTRIC SHOCKS IN COAL MINES.** By S. F. Walker. E. & M. J., vol. 90, p. 725. 15 columns.

See also **CAUSE OF ACCIDENTS, AND ELECTRICITY IN THE MINE.**

**PREVENTION OF SHOCKS IN COAL MINES.** E. & M. J., vol. 90, p. 728. ½ column.

**AUTOMATIC FIRE PROTECTION.** By W. A. Neracher. P. E. Soc. W. Pa., vol. 24, p. 321. 17 pages.

**MEANS OF PREVENTING MINE FIRES.** M. & M., vol. 31, p. 274. 1 column.

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**ON SAFETY APPLIANCES AND PRECAUTIONS NECESSARY IN MINES.** By J. R. Godfrey. T. A. I. M. E., vol. 6, p. 1. 33 pages. I.

**THE PREVENTION OF MINE ACCIDENTS:** Report of Committee to American Mining Congress. E. & M. J., vol. 90, p. 601. 19 columns.

**SAFETY IN MINES AND MILLS.** E. & M. J., vol. 90, p. 11. 2 columns.

**SAFETY PRECAUTIONS IN ALABAMA COAL MINES.** E. & M. J., vol. 88, p. 780. 1 column.

**SAFETY PRECAUTIONS IN ALABAMA COAL MINES.** By E. H. Cox. E. & M. J., vol. 89, p. 1165. 9½ columns. I.

**SAFETY APPLIANCES IN GERMAN MINES.** By R. W. Voigt. M. & M., vol. 30, p. 460. 3 columns. I.

See also **SAFETY CATCHES FOR MINE CAGES AND SHAFT-CLOSING ARRANGEMENTS.**

See also **OVERWINDING AND ITS PREVENTION, AND SAFETY CATCHES FOR MINE CAGES**

See also **MINE SUPPORT: Conditions Affecting.**

See also **COST OF DAMS, etc.**

### Rescue Work in Mines

**RESCUE WORK IN MINES.** Min. & Sci. Press, vol. 98, p. 349. 2 columns. I.

**MINE RESCUE WORK.** Min. & Sci. Press, vol. 101, p. 81. 7 columns. I.

**RESCUE WORK IN MINES.** P. C. M. & M. Soc. S. A., vol. 7, p. 100. 1½ columns.

**RESCUE WORK AT HAMSTEAD COLLIERY.** By D. J. Pierce. E. & M. J., vol. 86, p. 5. 1½ columns. I.

- RESCUE WORK AFTER MINE EXPLOSIONS.** E. & M. J., vol. 90, p. 82. 3½ columns.
- RESCUE WORK AT THE ST. PAUL MINE, CHERRY, ILLINOIS.** E. & M. J., vol. 88, p. 1073. 1½ columns
- THE POSSIBILITIES OF RESCUE WORK IN CONNECTION WITH MINE EXPLOSIONS AND FIRES.** By J. S. Hal-dane. T. I. M. E., vol. 39, p. 458. 27 pages. I.
- RESCUING THE MEN ENTOMBED AT ALPHA SHAFT NEAR ELY, NEVADA.** By E. W. Walter. E. & M. J., vol. 85, p. 407. 3½ columns.
- TO AVOID RESCUE WORK.** M. & M., vol. 30, p. 593. 1 column.
- PROVISIONS FOR MINE RESCUE IN BRITISH COLUMBIA.** E & M. J., vol. 90, p. 201. 1 column.
- COLLIERY RESCUE BRIGADES IN GREAT BRITAIN.** M. & M., vol. 31, p. 667. ½ column.
- SUGGESTIONS FOR THE ORGANIZATION OF COLLIERY RESCUE BRIGADES.** By Sgt. A. T. Winborn. T. I. M. E., vol. 37, p. 81, 19 pages. I; p. 294, 20 pages.
- THE AEROLITE RESCUE APPARATUS** M. & M., vol. 31, p. 521. 3½ columns. I.
- A NEW BREATHING APPARATUS.** M. & M., vol. 31, p. 759. 2½ columns. I.
- TISSOT BREATHING APPARATUS FOR RESCUE WORK.** By H. Briggs. E. & M. J., vol. 89, p. 1027. 7½ columns. I.
- AEROLITE BREATHING APPARATUS.** By Alfred Gradenwitz. E. & M. J., vol. 85, p. 105. 2 columns. I.
- THE WEG BREATHING APPARATUS.** E. & M. J., vol. 85, p. 366. 2 columns. I.
- BREATHING APPLIANCES FOR MINES.** P. C. M. & M. Soc. S. A., vol. 8, p. 65. 2 columns.
- ROYAL COMMISSION ON MINES AND BREATHING APPARATUS.** P. C. M. & M. Soc. S. A., vol. 8, p. 94. 3 columns.
- POINTS IN BREATHING APPARATUS.** P. C. M. & M. Soc. S. A., vol. 8, p. 397. ½ column.
- REQUIREMENTS OF A BREATHING APPARATUS FOR USE IN MINES.** By W. E. Mingramm. T. A. I. M. E., vol. 39, p. 341. 9½ pages. I.
- THE USE OF BREATHING APPARATUS AT A MINE FIRE IN CAPE BRETON, WITH SOME NOTES ON THE CENTRAL RESCUE STATION OF THE DOMINION COAL COMPANY, LIMITED, AT GLACE BAY, CAPE BRETON, NOVA SCOTIA.** By F. W. Gray and James McMahon. T. I. M. E., vol. 37, p. 100. 18 pages.
- BREATHING APPARATUS FOR USE IN MINES: DISCUSSION.** T. I. M. E., vol. 36, p. 53. 3 pages.
- RESPIRATION DEVICES FOR MINES: The Artificial Regeneration of Air for Respiration in Life-Saving Apparatus for Mining Service.** P. C. M. & M. Soc. S. A., vol. 5, p. 191. 2 columns.
- SELF-CONTAINED RESPIRATING APPARATUS IN MINES.** By A. E. Davidson. M. & M., vol. 29, p. 118. ½ column.
- OXYGEN HELMETS USED AT MINE FIRES.** By O. Callidge. M & M., vol. 30, p. 712. 1 column.
- OXYGEN HELMETS USED AT MINE FIRE.** By T. A. Carraher. M. & M., vol. 31, p. 161. 1½ columns. I.
- LIQUID OXYGEN FOR RESCUE WORK IN COAL MINES.** By A. Gradenwitz. E. & M. J., vol. 88, p. 923. 4½ columns. I.
- TESTS OF LIFE-SAVING APPLIANCES FOR MINES.** By R. Grimshaw. E. & M. J., vol. 87, p. 1192. 2 columns.
- RESCUE APPARATUS IN AUSTRIAN MINES.** E. & M. J., vol. 87, p. 414. ½ column.
- RESCUE APPARATUS FOR MINES.** E. & M. J., vol. 86, p. 8. 1½ columns.
- RESCUE APPARATUS IN COAL MINES.** By W. E. Mingramm. E. & M. J., vol. 85, p. 900. 5 columns. I.

**RESCUE APPARATUS FOR USE IN COAL MINES** P. C. M. & M. Soc. S. A., vol. 8, p. 160. 2½ columns.

**RESCUE APPLIANCES: Lessons from Glencoe.** By H. Kestner. P. C. M. and M. Soc. S. A., vol. 8, p. 306, 11 columns, I.; p. 385, 1 column, vol. 9, p. 21, ½ column; p. 41, 8½ columns, I.

**ON THE PRACTICAL USE AND VALUE OF COLLIERY RESCUE: Apparatus, and the Organization of Rescue Corps.** By Geo. B. Walker. T. I. M. E., vol. 36, p. 536. 19 pages.

**DREGER LIFE-SAVING APPARATUS IN A MINE FIRE.** Min. & Sci. Press, vol. 97, p. 401. ¾ column.

**A NEW SMOKE HELMET FOR MINE-FIRE FIGHTING.** M. & M., vol. 31, p. 281 ½ column. I.

**THE ANACONDA FIRE HOOD** By R. N. Bell. M. & M., vol. 29, p. 175. 2 columns. I.

See also **MINE FIRES.**

**THE ANACONDA PROTECTIVE HOOD.** By R. N. Bell. E. & M. J., vol. 86, p. 708. 2 columns. I.

**REGENERATION OF AIR FOR SUBMARINES WITH FUSED SODIUM PEROXIDE** P. C. M. & M. Soc. S. A., vol. 7, p. 51. 1 column.

**EUROPEAN LAWS REGARDING BREATHING APPARATUS.** M. & M., vol. 31, p. 413. ¾ column.

**COAL COMPANIES ESTABLISH RESCUE STATIONS.** E. & M. J., vol. 87, p. 951. 2 columns.

**MINE RESCUE LABORATORY.** By R. Y. Williams. M. & M., vol. 29, p. 537 2 columns. I.

**AN ENGLISH RESCUE STATION.** M. & M., vol. 29, p. 100. 3 columns. I.

**MINE RESCUE STATIONS AND MINE ACCIDENTS** E. & M. J., vol. 89, p. 281. 4 columns.

**RESCUE STATION AT LEISENRING No. 1.** By C. B. Franks. M. & M., vol. 30, p. 599. 2½ columns.

**RESCUE STATIONS IN ILLINOIS.** By R. Y. Williams. M. & M., vol. 31, p. 214. 5 columns. I.

**MINE RESCUE STATIONS IN ILLINOIS.** By R. Y. Williams. E. & M. J., vol. 90, p. 176. 7½ columns I.

**RESCUE STATIONS IN ILLINOIS COAL-MINING LOCALITIES.** By R. Y. Williams. J. W. Soc. E., vol. 15, p. 655 23½ pages I.

See also **PROTECTION IN MINING.**

### Compensation for Injuries

**MINER'S ACCIDENT RELIEF FUND.** E. & M. J., vol. 90, p. 25. ¾ column.

**COMPENSATION TO WORKERS FOR ACCIDENTAL INJURIES.** By M. M. Duncan. E. & M. J., vol. 88, p. 519. 4½ columns.

**COMPENSATION FOR INDUSTRIAL ACCIDENTS** By D. Ross. Min. & Sci. Press, vol. 101, p. 744. 5½ columns.

**COMPENSATION TO WORKMEN IN CASE OF INJURIES.** By M. M. Duncan. T. I. S. M. I., vol. 14, p. 47. 6 pages.

**COMPENSATION FOR INJURY.** By R. P. Tarr. M. & M., vol. 31, p. 410. 6½ columns.

**TAX FOR COMPENSATION TO INJURED.** P. C. M. & M. Soc. S. A., vol. 9, p. 246. Note.

See also **WORKMAN'S AID, COMPENSATION AND INSURANCE.**

**MINER'S BENEFIT FUND** E. & M. J., vol. 90, p. 1013. ¾ column.

**HOMESTAKE AID FUND.** E. & M. J., vol. 90, p. 309. 1½ columns

**INSURANCE AND MINE ACCIDENTS.** By G. W. Traer. Min. & Sci. Press, vol. 99, p. 717. 2 columns.

**ACCIDENT LIABILITY AND COMPENSATION.** E. & M. J., vol. 90, p. 23. 1½ columns

**INDUSTRIAL ACCIDENTS AND EMPLOYEES LIABILITY LAWS.** By D. Ross. Min. & Sci. Press, vol. 99, p. 716. 2½ columns.



**LIABILITY FOR INDUSTRIAL ACCIDENTS.**

By Sion B. Smith. M. & M., vol. 31, p. 501. 5 columns.

**POSSIBILITIES OF A NEW LIABILITY LAW.** By S. Reynolds. M. & M., vol. 31, p. 532. 7½ columns.

See also **WORKMEN'S AID, COMPENSATION AND INSURANCE.**

**First Aid in Mining Accidents**

**FIRST AID TO THE INJURED IN COAL MINES.** By M. J. Shields. Coal Mining Supplement, E. & M. J., vol. 88, p. 42. 8 columns I.

**FIRST AID FOR INJURED SPINES.** By T. C. Harvey. M. & M., vol. 31, p. 538 1½ columns. I.

**SUGGESTIONS FOR ORGANIZED UNDERGROUND AMBULANCE WORK.** T. I. M. E., vol. 37, pp. 42-44, 218-223.

**FIRST-AID CORPS IN ALABAMA COAL MINES** E. & M. J., vol. 89, p. 1166. ½ column.

**WILL FIRST AID CORPS LAST?** M. & M., vol. 29, p. 407. 1 column.

**ORGANIZATION OF FIRST-AID CORPS.** By M. J. Shields M. & M., vol. 29, p. 379. 3½ columns

**FIRST-AID WORK IN NEW SOUTH WALES.** M. & M., vol. 30, p. 366. ½ column.

**THE FIRST AID MOVEMENT.** By H. H. Stock. M. & M., vol. 29, p. 243. 11 columns. I.

**FIRST-AID WORK AT COAL MINES.** By J. H. Ketner. M. & M., vol. 31, p. 490. 2 columns. I.

**METHODS OF RESUSCITATION** P. C. M. & M. Soc. S. A., vol. 10, p. 303. 2 columns.

**RESUSCITATION AFTER ELECTRIC SHOCK.** M. & M., vol. 30, p. 91. 1½ columns.

See also **CAUSE OF ACCIDENTS, AND ELECTRICITY IN THE MINE.**

**APPARATUS FOR CONVEYING WOUNDED MEN FROM STOPES.** E. & M. J., vol. 89, p. 1263. 1 column. I.

See also **HEALTH OF MINERS.**

**FIRST-AID CONTEST AT INKERMANN.** M. & M., vol. 30, p. 225. 3 columns. I.

**FIRST-AID CONTEST.** By C. A. Graves. M. & M., vol. 29, p. 172. 2 columns. I.

**FIRST-AID CONTESTS.** M. & M., vol. 31, p. 197. 8½ columns I.

**READING FIRST-AID FIELD DAY.** By H. H. Stock. M. & M., vol. 30, p. 121. 4 columns. I.

See also **PROTECTION IN MINING.**

**Falls of Roof and Walls in Mines**

**FALLS IN SHAFTS: Shaft Accidents.** By F. H. Wynne. T. I. M. E., vol. 38, p. 653 18 pages.

**FALL OF LABORER DOWN THE RED JACKET SHAFT.** E. & M. J., vol. 90, p. 749 Note.

**WARRIOR RUN MINE ACCIDENT.** M. & M., vol. 29, p. 121. 2 columns I.

**ACCIDENTS CAUSED BY FALL OF ROCK AND COAL.** E. & M. J., vol. 88, p. 412. ½ column.

**ACCIDENTS CAUSED BY FALLING ROCK IN METAL MINES.** E. & M. J., vol. 87, p. 301. 1½ columns

**SUMMARY OF THE "REPORT OF A COMMITTEE APPOINTED BY THE ROYAL COMMISSION ON MINES TO INQUIRE INTO THE CAUSES OF AND MEANS OF PREVENTING ACCIDENTS FROM FALLS OF GROUND, UNDERGROUND HAULAGE, AND IN SHAFTS: Shaft Accidents.** By F. H. Wynne. T. I. M. E., vol. 38, p. 653. 18 pages.

**SUMMARY OF THE "REPORT OF A COMMITTEE APPOINTED BY THE ROYAL COMMISSION ON MINES TO INQUIRE INTO THE CAUSES OF AND MEANS OF PREVENTING ACCIDENTS FROM FALLS OF GROUND, UNDERGROUND HAULAGE, AND IN SHAFTS," Part II: Falls of Roof and Sides.** By W. Charlton and F. H. Wynne. T. I. M. E., vol. 39, p. 378. 20 pages.

**THE ALPHA SHAFT DISASTER.** By W. S. Larsh. M. & M., vol. 29, p. 104. 4 columns. I

See also **SUBSIDENCE IN MINE WORKINGS.**

See also **CAUSE OF ACCIDENTS.**

### **Inundation in Mines**

**DANGER OF INRUSHES OF SURFACE WATER.** E. & M. J., vol. 90, p. 973. 4½ columns. I

**TAPPING MINE WATER UNDER GREAT PRESSURE** By Robert Sibley. E. & M. J., vol. 85, p. 562. 9½ columns. I

**FLOOD DAMAGE AT THE GREAT FALLS SMELTER, MONTANA.** By F. S. Shewell. Min. & Sci. Press, vol. 97, p. 57. 2½ columns. I.

**THE MONTEREY FLOOD AND SAN LUISITO BRIDGE.** By S. J. Lewis. Min. & Sci. Press, vol. 99, p. 494. 4½ columns. I.

**RECLAIMING A FLOODED GYPSUM MINE.** By E. H. Fishack. E. & M. J., vol. 85, p. 1098. 3 columns. I.

**DIVERS IN MINING.** P. C. M. & M. Soc. S. A., vol. 7, p. 57. 2½ columns; The Engineer, June 1, 1906, p. 373.

See also **CAUSE OF ACCIDENTS.**

See also **COST OF DAMS, etc.**

### **Coal Dust as an Explosive Agent**

**DUST IN MINES.** Colliery Engineer, vol. 10, p. 152; vol. 12, pp. 113, 196, 268; vol. 13, pp. 6, 151.

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- EXPLOSIONS IN MINES AND COLLIERIES, AND METHODS OF VENTILATION. Min. Mag., vol. 1, p. 97. 10 pages. I.
- REMARKS ON SOME RECENT EXPLOSIONS IN COAL MINES. By C. J. Coll J. M. Soc. N. S., vol. 13, p. 51. 16½ pages.
- VIEWS RESPECTING COAL-MINE EXPLOSIONS: A Symposium. E. & M. J., vol. 87, p. 12. 14½ columns.
- REFLECTIONS ON SOME COLLIERY EXPLOSIONS. E. & M. J., vol. 90, p. 466. 6 columns.
- EXPLOSIONS IN MINES Experimental Station. P. C. M. & M. Soc. S A., vol. 9, p. 280. 1½ columns.
- THE MARIANNA EXPLOSION. M. & M., vol. 29, p. 272. 13½ columns. I.
- FACTS CONCERNING THE MARIANNA EXPLOSION. By F. W. Parsons. E. & M. J., vol. 86, p. 1162. 9 columns. I.
- THE LICK BRANCH EXPLOSION E & M. J., vol. 87, p. 171. ¾ column.
- LICK BRANCH DISASTER: Explosion. By H. H. Stoek. M & M., vol. 29, p. 360. 11½ columns. I.
- MINE EXPLOSION AT STEARNS, KENTUCKY. By H. M. Payne E. & M. J., vol. 89, p. 474 5½ columns. I.
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- THE MULGA MINE EXPLOSION. M. & M., vol. 31, p. 40. 4 columns. I and map of workings.
- THE MULGA MINE EXPLOSION. E. & M. J., vol. 89, p. 978. 1½ columns.
- EXPLOSION AT PALAN No. 2 MINE. M. & M., vol. 31, p. 202. 3½ columns. I.
- EXPLOSION AT PALAN MINE, MEXICO M. & M., vol. 30, p. 462 2 columns. I.
- THE DELAGUA, COLORADO, EXPLOSION. By G. F. Duck. M. & M., vol. 31, p. 374. 13½ columns. I.
- NOTES ON THE DELAGUA, COLORADO, EXPLOSION. M. & M., vol. 31, 641. 4 columns. I.
- THE STARKVILLE, COLORADO, EXPLOSION. M. & M., vol. 31, p. 261. 4 columns. I.
- THE MORAL OF STARKVILLE. By S. Reynolds. M. & M., vol. 31, p. 391. 3½ columns.
- THE PRIMERO DISASTER By R. L. Herrick. M. & M., vol. 30, p. 463. 16 columns I.
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- WEHRUM MINE EXPLOSION. M. & M, vol. 30, p. 118. 4½ columns.
- REPORT ON THE MONONGAH MINE EXPLOSION. By George Harrison. E. & M. J., vol. 85, p. 264. 4 columns.
- THE BELLEVUE EXPLOSION, ALBERTA. By J. Ashworth. M. & M., vol. 31, p. 399. 4 columns I.
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- NOTES ON THE NORTON HILL COLLIERY EXPLOSION. By H. M. Morgan. E. & M. J, vol 87, p. 994. 5 columns
- A NATAL COLLIERY EXPLOSION, AND UNDERGROUND FIRES IN FIERY MINES. By W. T. Heslop. T I. M. E., vol. 38, p. 338. 16 pages. I. See also MINE FIRES.
- MAYPOLE AND HULTON DISASTERS: Mine Explosions M & M, vol. 31, p. 667. ¾ column.
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- ATMOSPHERIC PRESSURE AND MINE EXPLOSIONS.** By W. Hartman E. & M. J., vol. 89, p. 1164 1½ columns. D.
- THE CAUSE OF COAL-MINE EXPLOSIONS.** By William Griffiths. E. & M. J., vol. 85, p. 301. 1½ columns.
- MINE EXPLOSIONS AND THEIR CAUSES.** By J Taylor. E. & M. J., vol. 87, p. 1191. 1½ columns.
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- MINE EXPLOSIONS AS RELATED TO EARTHQUAKES.** By W. A. Spalding. E. & M. J., vol. 87, p. 411. 9 columns.
- SEISMIC DISTURBANCES AND COAL-MINE EXPLOSIONS.** By A. H. Stow. E. & M. J., vol. 88, p. 449. 5½ columns.
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**SEALING SHAFTS AFTER EXPLOSION.** By J. A. Garcia. M. & M., vol. 30, p. 59. 6½ columns. I.

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### Poisoning and Injuries

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**PHOSPHOROUS POISONING.** M. & M., vol. 31, p. 693. 1 column.

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**LANDSLIDES IN THE SAN JUAN MOUNTAINS, COLORADO, INCLUDING A CONSIDERATION OF THEIR CAUSES AND THEIR CLASSIFICATION.** By L. C. Graton and C. H. Gordon. U. S. G. S., Professional Paper 67, 58 pages. I. 1909.

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- CONTRIBUTIONS TO CHEMISTRY AND MINERALOGY FROM THE LABORATORY OF THE UNITED STATES GEOLOGICAL SURVEY** By F. W. Clarke U. S. G. S., Bull. 167. 166 pages 1900.
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### Chemical Analysis in Cyaniding

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### **Methods of Determining Copper**

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- THIOCYANATE DETERMINATION OF COPPER** By W. Tsukakaski. E & M. J, vol 90, p. 969 1½ columns.
- RAPID ELECTROLYTIC DETERMINATION OF COPPER** By R. C Benner. E & M J., vol 90, p. 517. 5½ columns. I.
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- COMPARISON OF THE IODIDE CYANIDE AND ELECTROLYTIC METHODS FOR COPPER** E. & M J, vol. 87, p. 159 1½ columns
- THE EFFECT OF THE PRESENCE OF CERTAIN "ADDITION-AGENTS" UPON THE DENSITY AND THE COHERENCE OF ELECTROLYTICALLY DEPOSITED COPPER, LEAD AND SILVER.** By R. P. Jarvis and E. F. Kern. Sch. Mines Quart, vol. 30, p. 100. 29 pages. I
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- A DELICATE COLOR REACTION FOR COPPER** P. C. M. & M. Soc S A., vol. 7, p 296. ¼ column
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- See also **METALLURGY OF COPPER.**
- ### Electrolytic Analysis
- RAPID ELECTROLYTIC METHOD OF ANALYSIS.** By R. C. Benner Min. & Sci. Press, vol. 101, p 576. 3 columns.
- ELECTROLYTIC DETERMINATION OF BISMUTH.** E. & M J., vol 86, p. 115 ½ column.
- ELECTROCHEMICAL ANALYSIS WITH ROTATING ANODES.** E & M. J, vol. 85, p. 956. 2 columns
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- See also **METHODS OF DETERMINING COPPER.**
- ### Methods of Determining Iron
- ANALYSES OF THE CLINTON IRON-ORE OF ALABAMA.** T A I M. E, vol 40, p. 86. Table.
- ANALYSES OF THE CLINTON IRON-ORES, HUNTINGDON COUNTY, PENNSYLVANIA.** T. A. I. M E., vol. 40, p. 143. 2 pages. Tables.
- ANALYSES OF CLINTON OÖLTIC IRON-ORE, NEW YORK STATE.** T. A. I. M. E., vol. 40, p. 174. Table.

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SUBSEQUENT USE IN TITRATING IRON By C. Offerhaus and E H Fischer. Sch Mines Quart, vol 30, p 40. 4 pages

THE FERRITES, COMPOUNDS OF AN IRON ACID By J. S. C. Wells E. & M. J., vol. 86, p. 420 6 columns

## COMPRESSED AIR IN MINING

### General

SIMPLE PROBLEMS IN AIR-COMPRESSSION By E A Rix Min & Sci Press, vol 96, p 394. 7½ columns

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TEST ON A MODERN AIR-COMPRESSING PLANT AT THE LONG TUNNEL GOLD MINE, WALHALLA, AUSTRALIA. By E. J. Rigby. T. Au. I. M. E., vol. 5, p. 259. 17 pages. I.

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See also CYANIDING GOLD, ETC, and COST OF POWER

### Air Compressors, Types, Operation, Etc.

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## **CLAYS AND THEIR USES**

### **General**

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## CONCENTRATION

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**CONCENTRATION METHODS EMPLOYED IN AUSTRALIA.** T. Au. I. M. E., vol 12, p. 105. 26 pages Flow sheets.

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### Preparation of Coal

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**Pan Amalgamation**

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### Washing Coal and Mineral

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### Disposal of Waste

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- STATIONARY AND MOVING SURFACES FOR SLIME CONCENTRATION.** T. I. M. & M., vol. 19, p. 401. 4 pages.
- THE JAMES SLIMER.** By M. T. Hoster. E. & M. J., vol. 86, p. 1149.  $1\frac{1}{2}$  columns. I.

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### Sand Treatment

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### Dry Concentration

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### Salt Making

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**PURIFYING ROCK SALT BY FUSION** E & M J, vol 86, p 564. ½ column

**SALT-MAKING PROCESSES IN THE UNITED STATES** By T M. Chatard. U. S G S., 7th Ann Rept, pp. 491-535 1885-86 I.

**SALT PRODUCTION WITH EXHAUST STEAM** By N B. Beasley E & M J., vol 87, p 1150 1½ columns.

**NOTES ON THE EVAPORATED SALT INDUSTRY OF KANSAS** By C M. Young E & M J, vol 88, p. 558. 10½ columns. I.

**THE ROCK SALT MINING INDUSTRY IN KANSAS.** By S Ainsworth. E & M J, vol. 88, p 454. 7½ columns. I.

See also **METHODS OF MINING, and MINING THICK and MASSIVE DEPOSITS, also COST OF MILLING**

### Practice in Milling Ores

**ORE DRESSING IN THE UNITED STATES AND MEXICO.** By H. A. Guess. E. & M J., vol 88, p 864, 12 columns, D; p 966, 11 columns, I, D.

**PROGRESS AND PROBLEMS IN ORE DRESSING.** By C. De Kalb. Min & Sci Press, vol 100, p. 54. 7 columns. I.

**DESIGNING A THOUSAND-TON CONCENTRATING PLANT.** By C. C. Christensen. Min. & Sci. Press, vol. 101, p. 806. 4½ columns. I.

**THE CONQUEROR TAILINGS PLANT.** E. & M. J, vol. 89, p. 668. 2 columns I.

See also **DISPOSAL OF WASTE.**

**THE MECHANICAL PREPARATION OF ORES IN SARDINIA.** By E Ferraris. T. A I. M E., vol 39, p. 72. 25½ pages. I.

**CONCENTRATING MIXED ORES AT ROSAS, SARDINIA** By U. Coppa. E & M J, vol 85, p 943 10 columns I

**THE SOUTH UTAH MILL.** M & M, vol 31, p. 592. 8½ columns. I.

**CONCENTRATION AT NAGYBANYA, HUNGARY** Min & Sci Press, vol. 96, p. 66. 3 columns I

**MODE OF TREATMENT OF ORES AT THE MINES OF SCHEMNITZ, IN HUNGARY.** Min Mag, vol 3, p 260. 3 pages.

**MILLING OF ASBESTOS IN QUEBEC** J. C. M I, vol 13, p 411. 3½ pages. Flow-sheet

See also **OCCURRENCE OF ASBESTOS**

**PREPARATION OF BARITE FOR MARKET, MISSOURI** T. A. I. M. E., vol. 40, p 734 9½ pages I.

See also **OCCURRENCE OF BARITE and REDUCTION OF ORES**

**THE OHIO CONCENTRATOR.** By L. A. Palmer Min & Sci Press, vol 101, p. 301 7½ columns I.

**MIAMI CONCENTRATING MILL, ARIZONA** By R. L Herrick. M & M, vol. 31, p. 1. 5 columns I.

**THE OHIO CONCENTRATOR AT BINGHAM CANYON, UTAH.** By L. A. Palmer. M & M., vol. 29, p. 519. 3½ columns. Flow-sheet.

**CONCENTRATION AT CANANEA, MEXICO.** By C. De Kalb. Min. & Sci. Press, vol 101, p 325. 12½ columns. I.

**LAKE SUPERIOR ORE-DRESSING PRACTICE.** By L. S. Austin. Min. & Sci Press, vol. 96, p. 259. 3½ columns I.

**CONCENTRATION AT THE BUTTE REDUCTION WORKS.** By A H. Wetthey. E. & M. J., vol. 88, p. 415 3½ columns. I.

- EXPERIMENTAL MILL OF THE NEVADA CONSOLIDATED COPPER COMPANY.** By M. L. Requa. Min. & Sci. Press, vol. 97, p. 90 9 columns. Tables.
- DRESSING OF ORES AT THE YELTA COPPER MINE, SOUTH AUSTRALIA.** T. Au. I. M. E., vol. 11, p. 99. 4 pages.
- PREPARATION OF DIAMONDS AT THE DE BEERS MINES** P. C. M. & M. Soc. S. A., vol. 7, p. 228 2½ columns.
- PROGRESS IN THE TREATMENT OF GOLD ORE.** By A. James. Min. & Sci. Press, vol. 96, p. 41. 3½ columns.
- TREATMENT OF THE BANKET DEPOSITS, SOUTH AFRICA.** T. Au. I. M. E., vol. 3, p. 84 5 pages. I.
- ANALYSIS OF MINE AND MILL PRACTICE ON THE RAND.** By E. M. Weston. E. & M. J., vol. 89, p. 169, 14 columns, I.; p. 267, 10½ columns, I.
- DESCRIPTION OF ORE TREATMENT AT THE GIANT MINE, HARTLEY DISTRICT, RHODESIA** By R. C. H. Cooke. P. C. M. & M. Soc. S. A., vol. 9, p. 152 8½ columns. I.
- THE TREATMENT OF THE GOLD ORES OF HOG MOUNTAIN, ALABAMA** By T. H. Aldrich. T. Au. I. M. E., vol. 39, p. 578. 6 pages
- PROGRESS IN ORE TREATMENT AT KALGOORLIE** By M. W. Von Bernwitz. Min. & Sci. Press, vol. 100, p. 926 5½ columns.
- NOTES ON THE WAIHI ORE TREATMENT.** By R. Stokes. P. C. M. & M. Soc. S. A., vol. 8, p. 10, 8 columns, I.; p. 53, 3 columns; p. 121, 1 column; p. 209, ¾ column.
- THE TREATMENT OF THE AURIFEROUS SULPHIDE ORES OF KALGOORLIE.** By F. Moss. T. Au. I. M. E., vol. 8, pt. 1, p. 40. 27 pages.
- MILLING AND TREATMENT OF AURIFEROUS ORES IN NEW ZEALAND.** By H. A. Gordon. T. Au. I. M. E., vol. 9, p. 206. 18 pages.
- THE TREATMENT OF CASSILIS ORE, EAST GIPPSLAND, VICTORIA, AS CARRIED ON BY THE CASSILIS MINING COMPANY, N. L.** By W. Aplin. T. Au. I. M. E., vol. 9, p. 224. 10 pages. I. D
- TREATMENT OF SULPHIDE ORES IN VICTORIA** By S. Radcliff and J. Druermann. Min. & Sci. Press, vol. 99, p. 367. 3 columns
- MILLING AT GRASS VALLEY AND NEVADA CITY** By G. E. Wolcott. E. & M. J., vol. 87, p. 439 10 columns I
- SCHEMES OF CONCENTRATION AT COBALT.** M. & M., vol. 31, p. 303 9 columns. I
- CONCENTRATION AT COBALT, ONTARIO.** By G. E. Sancton. M. & M., vol. 29, p. 200 4½ columns. I
- METHODS OF CONCENTRATION AT COBALT, ONTARIO** By G. E. Sancton. J. C. M. I., vol. 11, p. 340. 8 pages.
- HYDROMETALLURGICAL OPERATIONS AT COBALT.** By J. Tyssowski. E. & M. J., vol. 90, p. 1253. 15½ columns. D.
- MILLING IN THE CRIPPLE CREEK DISTRICT, COLORADO** By S. A. Worcester. E. & M. J., vol. 87, p. 956. 5½ columns.
- See also WASHING COAL AND MINERAL PRACTICE AT THE CAMP BIRD MILL.** Min. & Sci. Press, vol. 97, p. 669. 1½ columns.
- SEPARATION OF MIXED SULPHIDES AT CHARCAS, SAN LUIS POTOSI** By R. C. Canby. E. & M. J., vol. 85, p. 698. 5 columns.
- SOME FEATURES OF SILVER ORE TREATMENT IN MEXICO** By W. A. Caldecott. P. C. M. & M. Soc. S. A., vol. 8, p. 203, 6½ columns; p. 266, 7 columns; p. 352, 2 columns; p. 384, 4 columns; vol. 19, p. 10, 7 columns; p. 97, 1½ columns.
- RIO PLATA MINE AND MILL, WESTERN CHIHUAHUA.** By H. J. Baron. E. & M. J., vol. 87, p. 147. 14 columns. I.

- MILLING GOLD AND SILVER ORES AT  
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- MILLING AND CYANIDE PRACTICE AT  
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- THE DOS ESTRELLAS MILL. Min. &  
Sci Press, vol 96, p 197. 3 col-  
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- MILLING AND CYANIDE PRACTICE,  
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- See also CYANIDING ORES
- METHOD OF CONCENTRATION AT THE  
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- SAN YGNACIO MINE AND MILL, CHI-  
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& M. J., vol. 86, p. 615. 13 col-  
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- HACIENDA BUBURON, AN OLD MEXICAN  
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- THE NEW ESPERANZA MILL AT EL  
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- MINING AND MILLING AT STOCKTON,  
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umns. I.
- BOSTON SUNSHINE MILL, UTAH. By  
G. W. Wood. Min & Sci Press,  
vol. 99, p. 295. 2½ columns. I.
- MILLS AND MILLING AT RAWHIDE,  
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- WORKING OF ORES AT THE AUBURN  
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- THE BUTTERS SLIME-FILTER AT THE  
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S Leaver Min. & Sci Press, vol 97,  
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- EQUIPMENT AND PRACTICE AT FLO-  
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- MILLING AT COMBINATION MILL, GOLD-  
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& M, vol. 29, p 209. 1 column I.
- THE COMBINATION MINE By E. A.  
Collins Min. & Sci Press, vol. 95,  
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6½ columns, I.
- CONCENTRATION PRACTICE AT THE  
DESERT MILL, MILLERS, NEVADA.  
Min & Sci. Press, vol. 95, p. 494.  
8½ columns. I.
- THE DESERT MILL, MILLERS, NEVADA.  
By A. R. Parsons. Min. & Sci.  
Press, vol. 95, p. 494. 8½ columns. I.

- MILLING PLANT OF THE MONTANA-TONOPAH MINING COMPANY** By G. H. Rotherham. Min & Sci. Press, vol 97, p. 324 7½ columns. I.
- TONOPAH EXTENSION MILL** By J. G. Kirchen. Min & Sci. Press, vol. 100, p. 522 4 columns
- NEW MILL OF THE TONOPAH EXTENSION MINING COMPANY.** E. & M. J., vol 89, p 1066. 3 columns I.
- MILLING AT TONOPAH, NEVADA.** E & M. J, vol 87, p. 595. 6 columns. I.
- MINING AND REDUCTION OF ELY, NEVADA, ORES.** By R. L. Herrick. M. & M., vol. 29, p. 167. 11½ columns I.
- PITTSBURG SILVER PEAK MILL, NEVADA.** By H. Hanson M. & M., vol. 29, p. 569. 8½ columns. I.
- MECHANICAL TREATMENT OF GOLD ORE.** By W. J Adams. Min. & Sci Press, vol 95, p 374 1½ columns
- See also AMALGAMATION.
- IMPROVEMENTS IN THE HOMESTAKE MILL.** Min. & Sci Press, vol. 95, p. 812 1 column I.
- SIMMER DEEP AND JUPITER REDUCTION WORKS** By J. E Thomas Min. & Sci Press, vol. 99, p. 396 6½ columns. I.
- CONCENTRATION OF FLAKE GRAPHITE** By F D. Chester. E & M. J., vol 88, p 824. 3½ columns
- See also OCCURRENCE OF GRAPHITE.
- UTILIZATION OF IRON SANDS.** Min. & Sci Press, vol. 20, p. 355. 1 column.
- See also SAND TREATMENT.
- TREATMENT OF THE BRUCE IRON ORE, ONTARIO.** J. C. M. I., vol. 10, p 160. 2 pages
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- MILLING PRACTICE AT THE EUGENE MINE, KOOTENAY, BRITISH COLUMBIA.** E. & M. J., vol. 89, p. 422. 4 columns. I. Flow-sheet.
- MINE AND MILL OF LE ROI No 2, LTD, ROSSLAND, BRITISH COLUMBIA.** By R H Allen. E. & M J, vol. 89, p. 176. 5½ columns. I.
- TABLE CONCENTRATION IN THE CŒUR D'ALENE DISTRICT.** Min. Mag., London, vol. 2, p 444. 4 columns. I
- MILLING OF LEAD-SILVER ORE.** By G. Caetani Min. Mag., London, vol 2, p 361, 14 columns, I, p. 441, 12 columns, I; p. 48, 16 columns, I
- ORE DRESSING IN THE CŒUR D'ALENE DISTRICT.** By E. S Wiard. E & M. J, vol 88, p 1055, 13½ columns, I, p 1104, 16 columns, I., p. 1205, 21 columns, I
- TREATMENT OF ORE IN THE CŒUR D'ALENE LEAD REGION.** Min. & Sci Press, vol. 96, p 626. 3 columns I
- MILLING IN THE CŒUR D'ALENE.** By G. Huston Min & Sci. Press, vol. 96, p. 232 1½ columns.
- NEW CONCENTRATOR OF THE BUNKER HILL AND SULLIVAN.** By G Caetani. Min. & Sci Press, vol 100, p 120 5½ columns. I.
- ORE DRESSING IN THE CŒUR D'ALENE DISTRICT.** By E. S Wiard E & M. J, vol 89, p. 20, 23 columns, I.; p. 375, 7½ columns, I; p. 514, 13½ columns, I, p 570, 7½ columns, p. 822, 10 columns, p 875, 7½ columns, I., p 967, 8½ columns, I.
- CONCENTRATING DIFFICULT LEAD ORES AT BROKEN HILL, NEW SOUTH WALES.** By G. W Williams. E. & M. J., vol 87, p. 939. 6 columns.
- ORE TREATMENT AT THE BROKEN HILL PROPRIETARY MINE.** By G. D Delprat T. Au. I. M E, vol. 12, p. 1. 28 pages. I.
- CONCENTRATION AT THE BLUE BELL MINE, BRITISH COLUMBIA.** E. & M. J., vol 88, p. 785. 2½ columns.
- THE AMERICAN MILL AT ORONOGO, JOPLIN DISTRICT** By Doss Brittain. E. & M. J, vol. 85, p. 1039. 6½ columns. I.

- IMPROVEMENTS IN THE OROGOGO CIRCLE MILL No 5.** By O. Ruhl E. & M J., vol. 86, p. 993. 5 columns. I.
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- ORE DRESSING IN THE JOPLIN DISTRICT.** M. & M., vol 30, p. 383 3½ columns I
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- MILLING AT DOE RUN, SOUTHEAST MISSOURI.** E & M. J., vol 89, p 610. 2 columns I
- THE MINING AND MILLING OF SILVER-LEAD AND ZINC ORES AT PIERREFITTE MINES, FRANCE.** By W.W Van Ness T A. I. M. E., vol. 39, p 369. 22½ pages I.
- CONCENTRATION OF SILVER-LEAD ORES.** By V. F. S. Low. T Au. I. M. E., vol. 10, p. 197. 16 pages. I.
- CONCENTRATION OF LEAD-SILVER ORES.** By V. F. S. Low. T Au I. M. E., vol. 11, p 164 12 pages. I
- DRESSING OF ORES: A Freiberg Process.** Min. & Sci Press, vol. 20, p. 2, 1½ columns, p. 66, 1½ columns, I., p. 130, 1 column, I.
- WET CONCENTRATION AT MIDVALE, UTAH.** By L. A. Palmer M & M, vol 30, p. 517 5½ columns. I.
- CONCENTRATION AT FREIBERG, GERMANY.** E. & M. J., vol. 87, p. 988. 1½ columns.
- METHOD OF MILLING LEAD ORES AT THE CUMBERLAND MINES, ENGLAND.** E & M J., vol. 85, p 299 2 columns I.
- MILLING FLORIDA PHOSPHATES.** E & M J., vol. 87, p 490. 8 columns I.
- See also **OCCURRENCE OF PHOSPHATES.**
- TIN-DRESSING.** By H W. Hutchin. Min. Mag., London, vol 2, p. 295. 3 columns
- NOTES ON TIN DRESSING** By H. W. Hutchin T. I M & M., vol. 18, p 69. 38½ pages. I.
- NOTES ON TIN ORE DRESSING AT SOUTH CROFTY.** E & M. J, vol 87, p. 651 4 columns.
- TIN-DRESSING AT STANLEY HILLS, NORTH QUEENSLAND** By W. L. Cleland T. Au I. M. E., vol 12, p. 154. 10 pages I.
- CONCENTRATION OF TIN ORES AT CHOROLQUE, BOLIVIA** Min. Mag., vol. 4, p. 214 2 columns. D.
- TIN MINING AND MILLING IN THE BOLIVIAN ANDES** By G W Dean. E. & M J, vol 90, p. 1053. 5½ columns I
- ZINC MINING IN NEW JERSEY.** By H. B. Kummel E. & M J., vol. 87, p. 11. 1½ columns
- THE GREAT BOULDER PERSEVERANCE MILL** Min Mag, vol. 4, p. 388. ½ column Flow-sheet
- CONCENTRATION AT CATAMA, CHILE.** By F. A. Sundt M & M., vol. 31, p. 605. 3½ columns

## CONCRETE, MORTARS, AND PLASTERS

- Cement and Concrete: Their Properties and Uses**
- LIME IN CEMENT.** Min. & Sci. Press, vol. 95, p. 282. ½ column.
- PORTLAND CEMENT CALCULATIONS.** M & M., vol 31, p. 25. 1½ columns.
- PORTLAND CEMENT.** By J. L. Howard. Min. & Sci. Press, vol. 98, p. 630. 8½ columns.
- PORTLAND CEMENT** Min. & Sci. Press, vol. 96, p 170. ½ column.
- THE MANUFACTURE OF PORTLAND CEMENT.** By W. M. Kinney. P. E Soc. W. Pa., vol. 25, p. 103. 36 pages. I.
- NOTES ON THE BRITISH STANDARD SPECIFICATION FOR PORTLAND CEMENT, AND OBSERVATIONS ON THE**



- USE OF WATER AND CONCRETE IN STRUCTURAL WORK. By W. Watts. T. I. M. E., vol. 37, p 318 13 pages
- CALCULATING THE HEAT BALANCE OF LIME KILNS By Robt Schott. E. & M J, vol 85, p. 613. 6 columns.
- CHARACTERISTIC TESTS OF CEMENT By L. L. Kimball U. S. G. S., Mineral Resources, 1904
- COMBUSTION IN CEMENT-BURNING By B E Eldred T. A. I. M. E., vol. 41, p. 479, 10½ pages; p 905, 3½ pages
- PORTLAND CEMENT MORTARS AND THEIR CONSTITUENT MATERIALS; Results of Tests Made at the Structural-Materials Laboratories, Forest Park, St Louis, Missouri. By R. L. Humphrey. U. S. G. S., Bull. 331 130 pages. I 1908
- ON THE EMPLOYMENT OF RUBBLE BÉTON OR CONCRETE IN WORKS OF ENGINEERING AND ARCHITECTURE. By J Rennie Min Mag, vol 10, p. 60. 4 pages.
- TESTS OF CONCRETE By R L Humphrey M. & M., vol 29, p. 159 1½ columns.
- THE BOND BETWEEN CONCRETE AND STEEL. By T. L. Condron. J W Soc. E., vol. 12, p. 100 17½ pages. I.
- DEFORMED BARS VS ROUND RODS ANCHORED FOR REINFORCED CONCRETE. By J. H. Toupet. P. E. Soc. W. Pa., vol. 25, p. 505 35 pages. I.
- REINFORCED CONCRETE TRETTLES FOR RAILWAYS By C. H. Cartledge J W. Soc E, vol. 15, p. 543 30 pages I.
- BONDING NEW TO OLD CONCRETE. P C. M. & M Soc. S. A, vol. 10, p. 156. ¾ column.
- STRENGTH OF CONCRETE JOINTS. By J. L. Miner. P. E. Soc. W Pa., vol. 24, p. 471. 20½ pages. D.
- STRENGTH OF CONCRETE BEAMS. By R. L. Humphrey. U. S. G. S., Bull. 344. 59 pages. 1908.
- NOTES ON CONCRETE CONSTRUCTION. By R. A Cummings. P E Soc W. Pa., vol. 26, p. 159. 28 pages. I
- FORMS FOR CONCRETE By J. D. Stevenson P. E. Soc. W. Pa., vol. 26, p 270 46 pages. I.
- HOW TO PREVENT FAILURE IN CONCRETE CONSTRUCTION By W. Michaels. J. W. Soc. E, vol 12, p 455. 18 pages.
- CONCRETE BOATS AND BARGES. Min. & Sci Press, vol. 97, p. 95 ¾ column.

### Use of Concrete in Mines

- FILBERT MINE CONCRETE-LINED SHAFTS. By A. F. Allard and H S. Patterson M & M., vol 30, p. 557. 17 columns. I.
- SINKING CONCRETE SHAFTS IN QUICKSAND By F W Adgate. E & M. J, vol 88, p. 1159 9½ columns I.
- CONCRETE LININGS IN SHAFT SINKING. By R. H. Rowland E. & M J, vol 88, p. 359. 7 columns. I.
- CONCRETE SHAFT LINING. Min & Sci. Press, vol. 97, p 745. 6½ columns. I.
- BRIER HILL CONCRETE-LINED SHAFT, VULCAN, MICHIGAN. By W. Kelly. E & M. J., vol 89, p. 970 6 columns. I.
- CONCRETE SHAFT LININGS. M. & M., vol. 29, p. 563. 6½ columns I
- CONCRETE SHAFT LINING. Min & Sci. Press, vol 95, p 183 4½ columns. I.
- CONCRETE SHAFT LININGS. T. L. S. M. I., vol 15, p. 92 4½ pages I.
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- CONCRETE LINED SHAFTS SUNK THROUGH QUICKSAND. T. L. S. M. I., vol. 14, p. 55. 16 pages. I.

CONCRETE SHAFT LINING M. & M., vol. 31, p. 516. 10 columns I

METHOD OF SINKING AND CONCRETING THE FILBERT MINE, PENNSYLVANIA. M. & M., vol. 30, p. 558 4 columns I.

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SINKING A REINFORCED CONCRETE MINE SHAFT By A H Fay E & M. J., vol. 88, p. 599. 4½ columns I.

SINKING A REINFORCED CONCRETE SHAFT By L L Brown Min & Sci Press, vol. 97, p. 745 6½ columns I

STEEL FORMS FOR CONCRETE SHAFT LINING M. & M., vol. 30, p. 557. 1 column

STEEL FORMS USED IN LINING THE BRIER HILL MINE WITH CONCRETE. E & M J, vol. 89, p. 971 1 column. I.

FORMS FOR CONCRETING SHAFTS M. & M., vol. 30, p. 634. ¼ column.

SINKING IN WET GROUND BY INJECTING CONCRETE. Cementation. By J Lombois E & M J., vol. 87, p. 653. 8½ columns I.

THE USE OF CEMENT FOR TUBBING IN DEEP SHAFTS E & M. J, vol. 86, p. 427. 1 column

CONCRETE-STEEL CAISSONS. Their Development and Use for Breakwater, Piers and Revetments. By W. V. Judson. J W. Soc. E., vol. 14, p. 533. 76 pages. I.

NORTH LAKE CONCRETE SHAFT AND FOUNDATION FOR STEEL HEADFRAME E. & M. J., vol. 88, p. 722. 1 column. I.

REINFORCED CONCRETE FOUNDATIONS FOR STAMP BATTERIES. By S. J. Truscott T. I M. & M., vol. 18, p. 25. 12 pages. I.

See also STAMP MILL PRACTICE.

CONCRETE ENGINE FOUNDATION By A. H. Shaw M & M, vol. 30, p. 170. 1½ columns. I

SOME DETAILS OF CONCRETE CONSTRUCTION, RETAINING WALLS, ETC. By L J Hotchkiss J W Soc E, vol. 12, p. 349 23 pages. I

See also FOUNDATIONS FOR BUILDINGS and MINE CONSTRUCTIONS

CONCRETE IN THE HUDSON RIVER TUNNELS By W M. Torrance. J W Soc E, vol. 13, p. 632 30 pages I

SPECIAL CONCRETE STRUCTURES IN THE HUDSON RIVER TUNNELS. By W M Torrance J. W. Soc. E, vol. 13, p. 632 30 pages I

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AMOUNT OF CONCRETE USED IN LINING THE CONCRETE SHAFT AT THE FILBERT MINE, PENNSYLVANIA M. & M, vol. 30, p. 565 Table.

METHOD OF CONCRETING SHAFTS M. & M, vol. 30, p. 633. 2 columns I.

USE OF CONCRETE IN THE CLONAN SHAFT, MINEVILLE, NEW YORK By G C. Stoltz. E & M. J., vol. 85, p. 111 1½ columns

CONCRETE FOR SHAFT TRACKS P. C. M. & M Soc S. A., vol. 10, p. 415. ¾ column.

See also MINE ROADS AND TRACKS.

THE USE OF CONCRETE FOR MINE SUPPORT. By W R Crane. T. I. M. E, vol. 37, p. 560. 26 pages. I.

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- Cost of Excavating**
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**COST OF EXPLOSIVES AT THE PORTLAND MINE, CRIPPLE CREEK, COLORADO.** T. A I M E, Bethlehem Meeting, Feb, 1906, p 1327 Table.

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**COST OF POWDER PER TON ANTHRACITE MINED IN PENNSYLVANIA** The Anthracite Coal Industry, Roberts, p. 118.

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**COST OF MAMMOTH BLASTING.** T A. I. M. E., vol. 7, p. 285

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**COST OF SUBMARINE BLASTING, PORT FREMANTLE, AUSTRALIA.** Gold Min. & Mill., W. Aus., p. 452.

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## Cost of Flume and Ditch Construction

**COST OF FLUME CONSTRUCTION.** Miner's Pocket Book, Lock, p 61. Notes.

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**COST OF FLUMES.** E. & M. J, vol. 75, p. 785. Table; vol. 76, pp. 267-268.

**COST OF WOOD VS. STEEL FLUMES.** J. C M. I, vol 6, p. 237.

**COST OF SLUICE-BOX CONSTRUCTION.** Min & Sci. Press, vol 53, p. 245. Table.

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**COST OF VARIOUS FUELS.** T. A. I. M. E., vol. 40, p. 49. 5 pages.

**COST OF ELECTRICITY AND WOOD IN MINES AND MILLS** Min. & Sci. Press, vol 85, p. 104.

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- COST OF GENERATING HORSE POWER WITH WOOD, COAL, OIL, ETC., ON THE MOTHER LODGE E. & M. J., vol. 75, p. 149
- COMPARATIVE COSTS OF FUEL. E & M J., vol 81, p. 180.  $\frac{1}{2}$  column.
- COST OF GASOLINE AND ELECTRIC POWER AT GOLDFIELD, NEVADA Min & Sci. Press, vol. 94, p 722.
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- COST OF FUEL AT THE KIMBERLEY DIAMOND MINES. T. N. S. I. M. & M. E., vol. 10, p. 108.
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- COST OF COAL FOR STEAM-POWER. Kent's Mech. Engrs. Pocket-Book. p 789.  $\frac{1}{2}$  page. Table
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- COST OF CHARCOAL MADE FROM ONE CORD OF WOOD T. A. I. M. E., vol 16, p. 198.
- GERMAN COAL PRICES. E. & M. J., vol 75, p 717.
- See also THE COMPOSITION AND CHARACTERISTICS OF COAL.
- COST OF COKE T. A. I. M. E., vol. 17, p. 48
- COST OF COKE-MAKING AT THE OLIVER COKE-WORKS, UNITED STATES T. I. M. E., vol 27, p. 499. Tables.
- COST OF COKE MAKING. E. & M. J., vol. 54, pp. 250 and 268.
- ESTIMATED COST OF ONE BEEHIVE COKE OVEN M. & M., vol 24, p. 5. Table.
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- THE MANUFACTURE AND COST OF COKE. F Kocener. E. & M. J., vol. 42, pp. 291, 362, 399, 421 and 452.
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- COST OF DRAWING COKE FROM OVENS BY MACHINE T. A. I. M. E., vol. 36, p. 359. Table.
- See also COKE: Its Properties and Manufacture.
- COST OF GAS POWER. E. & M. J., vol 84, p. 917. Table.
- COST OF GAS POWER T. I. M. E., vol. 15, pp. 331, 334, 335, 338.
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### Cost of Handling and Storing

COST OF LOADING COAL INTO CARS IN MINES. E & M. J., vol 85, p. 815. 2 columns

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### Cost of Haulage

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- RELATIVE COSTS OF DIFFERENT HAULAGE SYSTEMS:** Horse, Tail Rope, Electric, Endless Chain, and Endless Rope. Coll. Eng. & Met. Miner, vol. 14, p. 314
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- COST OF INSTALLATION AND OPERATION OF HAULAGE PLANT AT STOCKETT, MONTANA.** M. & M., vol. 19, p. 276.
- COST OF MINE HAULAGE.** M. & M., vol. 21, p. 169.  $\frac{1}{2}$  column.
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- COST OF HAULAGE IN THE ANTHRACITE FIELDS:** Animal, Compressed Air, Tail-rope and Electric. E. & M. J., vol. 84, p. 163.
- COST OF HAULAGE ON THE RAND.** Witwatersrand Goldfields, p. 402.  $1\frac{1}{2}$  pages.
- COST OF HAULING AND PUMPING ON THE RAND.** Gold Mines of the Rand, pp. 259, 264 and 265. Table.
- SECONDARY HAULAGE:** Cost of Putting and Driving. By T. E. Forster and F. R. Simpson. T. I. M. E., vol. 15, p. 136. 5 pages.
- COSTS OF HAULAGE:** Maintenance, Wages, Interest and Depreciation. T. I. M. E., vol. 15, pp. 137, 138, 139.
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- COST OF HAULING EQUIPMENT FROM ALAMOSA TO RICO, COLORADO, IN THE EARLY DAYS.** U. S. G. S., 22d Ann Rept, pt. 2, p. 241.
- COST OF TRANSPORTATION IN DRIFT MINING.** Min. & Sci. Press, vol. 68, p. 165. Table
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- COST OF ANIMAL HAULAGE.** E. & M. J., vol. 75, p. 331
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- COST OF ANIMAL HAULAGE IN COAL MINES OF TENNESSEE AND ALABAMA.** M. & M., vol. 26, p. 102. 4 columns
- RELATIVE COST OF MULE AND ELECTRIC HAULAGE IN COLLIERIES.** E. & M. J., vol. 81, p. 1102.
- COST OF ANIMAL HAULAGE UNDERGROUND.** T. F. I. M. E., vol. 13, p. 119.
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- COST OF MULE AND ELECTRIC HAULAGE.** E. & M. J., vol. 82, p. 976. Tables.
- COST OF INSTALLATION OF MULE AND ELECTRIC HAULAGE IN MINES.** E. & M. J., vol. 83, p. 530. Tables.
- COMPARATIVE COST OF MINE HAULAGE BY MULES AND ELECTRIC LOCOMOTIVES.** Eng.-Cont., vol. 27, pp. 95, 138  $2\frac{1}{2}$  and 3 columns.
- COST OF INSTALLING AN ELECTRIC HAULAGE PLANT.** T. L. S. I. M. E., vol. 4, pp. 16 and 22.
- COST OF STEAM AND ELECTRIC HAULAGE.** E. & M. J., vol. 37, p. 292.  $1\frac{1}{2}$  columns.
- COST OF HAULAGE BY ELECTRIC MOTORS VS MULES.** Miner's Pocket Book, Lock, p. 117. Tables.
- COST OF ELECTRICAL HAULAGE.** Miner's Pocket Book, Lock, pp. 283, 284, 285 and 294
- COST OF ELECTRIC LOCOMOTIVE HAULAGE AT THE 1870-FOOT LEVEL, SHAMROCK 1 AND 2 COLLIERIES, GERMANY.** E. & M. J., vol. 89, p. 1238. Table.

- COST OF ELECTRIC HAULAGE AT PLEASLEY COLLIERY.** T. F. I. M. E., vol. 12, p. 634.
- COST OF ELECTRIC MOTORS, DYNAMOS AND CABLE.** Miner's Pocket Book, Lock, p. 118. Table
- COST OF ELECTRIC TRACTION** J. W. Soc. E., vol. 1, p. 762 Table
- COST OF ELECTRIC- AND MULE-HAULAGE IN COAL MINES.** T. A. I. M. E., vol. 19, p. 281.
- COST OF ELECTRICITY, MULE AND TAIL-ROPE HAULAGE.** T. A. I. M. E., vol. 18, p. 418.
- COST OF MINE HAULAGE.** E & M J., vol. 74, p. 407.
- COST OF ELECTRIC- VS WIRE-ROPE HAULAGE** T. F. I. M. E., vol. 7, pp 584, 585
- COST OF MINE TROLLEY WIRING.** M. & M., vol. 28, p. 453. Table.
- COMPARATIVE COSTS OF TROLLEY AND STORAGE BATTERY HAULAGE** Min. & Sci. Press, vol. 71, p. 205. Table.
- COST OF COMPRESSED AIR HAULAGE IN A MINE.** Min. & Sci. Press, vol. 84, p. 89.  $\frac{1}{2}$  column
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- COMPARATIVE COSTS OF COMPRESSED AIR, ELECTRICITY AND MULE HAULAGE.** Min. Mag., vol. 12, p. 383.
- COST OF OPERATING COMPRESSED AIR HAULAGE PLANT.** M. & M., vol. 25, p. 569.
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- COST OF COMPRESSED AIR MOTORS FOR GATHERING CARS IN MINES** T. A. I. M. E., Albany Meeting, Feb., 1903, p. 4. Table
- ESTIMATED COST OF A COMPRESSED-AIR ROAD IN THE UNITED STATES.** T. A. I. M. E., vol. 19, p. 561.
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- COST OF TAIL-ROPE HAULAGE.** Miner's Pocket Book, Lock, pp. 293, 294. Tables.
- COST OF INSTALLATION, MAINTENANCE AND OPERATION OF TAIL-ROPE SYSTEM OF HAULAGE** E. & M. J., vol. 74, p. 679.
- COMPARATIVE COSTS OF HAULAGE BY CHAINS AND WIRE ROPE.** E & M. J., vol. 33, p. 278 Table.
- COST OF OPERATING UNDERGROUND ROPE HAULAGE IN THE COAL MINES OF THE RHUR DISTRICT.** Gluckauf, 1900, p. 141.
- COST OF HAULAGE BY GASOLINE MOTORS AND BY MULES.** M. & M., vol. 31, p. 630. Table.
- See also **GASOLINE MOTORS.**
- COMPARATIVE COST OF LOCOMOTIVE AND MULE HAULAGE.** E. & M. J., vol. 6, p. 154. Tables.
- COST OF LOCOMOTIVE HAULAGE.** E. & M. J., vol. 75, p. 331.
- COST OF HAULAGE BY LOCOMOTIVES AND MULES.** Second Geol. Sur. Pa., AC, p. 222 Tables.
- See also **STEAM LOCOMOTIVES.**
- COST OF VERTICAL AND INCLINED EQUIPMENT.** T. I. M. & M., vol. 11, plate 79.
- COST OF OPERATING A COMBINED GRAVITY AND POWER HOIST SYSTEM IN TENNESSEE.** M & M., vol. 19, p. 534.
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- COST OF ENGINE PLANE TRACK, ENGLAND, 1880-'83** T. N. S. I. M. & M. E., vol. 6, p. 107. Table.
- COST OF TRACK LAYING IN AN ENTRY OF GIVEN LENGTH.** M. & M., vol. 19, p. 474. Table.

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### Cost of Hoisting

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COST OF ROPE PER TON ORE TREATED, WESTERN AUSTRALIA Gold Min. & Mill, W. Aus., p. 456 Table.

COST OF DIFFERENT KINDS OF ROPE PER TON HOISTED. T. I. M. & M., vol 11, p. 172. 1 page.

COST OF LANG LAY ROPES T. I. M. E., vol. 30, p. 568. Table.

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### Cost of Hydraulic Mining

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### Cost of Labor

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REDUCTION OF MINER'S WAGES. Min. & Sci. Press, vol. 34, p. 118. 1½ columns.

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METHODS OF PAYING MINER'S WAGES. By J. Daniels. E. & M. J., vol. 84, p. 358 3½ columns.

LABOR COST FOR A CROSSING AND INCLINE. T. N. S. I. M. & M. E., vol. 6, p. 198. Table.

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LABOR AND TONNAGE CHART AS AIDS IN REDUCING COSTS. By C. T. Rice. E. & M. J., vol. 90, p. 754. 5 columns. D.

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- COST OF LABOR ON THE RAND. Gold Mines of the Rand, p. 252. 6 pages
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- LABOR COST IN THE PILGRIM'S REST MINES. P. C. M. & M. Soc. S. A., vol. 9, p. 299. 1 column
- LABOR COSTS AT THE KIMBERLEY MINES. T. N. S. I. M. & M. E., vol. 10, p. 105.
- LABOR COST ON THE RAND. T. N. S. I. M. & M. E., vol. 10, p. 137.
- SCHEDULE OF PRICES OF LABOR PER SHIFT, THE RAND MINES. T. A. I. M. E., vol. 39, p. 429 Table
- COST OF LABOR, TIMBER AND HAULAGE AT THE TURKEY HEAVEN GOLD DISTRICT, ALABAMA. E. & M. J., vol. 55, p. 486.
- LABOR COSTS IN THE ALABAMA AND GEORGIA GOLDFIELDS. T. A. I. M. E., vol. 26, p. 472. Table.
- LABOR COST IN TUNNELING IN THE ALABAMA GOLDFIELDS. E. & M. J., vol. 55, p. 486.
- LABOR COST AT BRILLIANT COAL MINES, ALABAMA (1906). T. A. I. M. E., vol. 37, p. 490. 1 page.
- LABOR COST ON THE YUKON IN 1896. U. S. G. S., 18th Ann. Rept., pt. 3, p. 387.
- COST OF LABOR AT BISBEE COPPER MINES, ARIZONA. M. & M., vol. 27, p. 293.  $\frac{1}{2}$  column
- LABOR COST IN THE DEEP ALLUVIAL WORKINGS, AUSTRALIA. T. I. M. & M., vol. 7, p. 114. Table.
- COST OF LABOR IN WESTERN AUSTRALIA. Gold Min. & Mill., W. Aus., pp. 455, 457, 460, 461, 464, 465, 606 Tables.
- COST OF LABOR PER TON ORE AT THE GOLDEN HORSESHOE, WESTERN AUSTRALIA. Gold Min. & Mill., W. Aus., p. 616. Table.
- LABOR COST AND DISTRIBUTION IN MILLING, AUSTRALIA. P. C. M. & M Soc. S. A., vol. 8, p. 239 1 column.
- LABOR COSTS IN WESTERN AUSTRALIA. M. & M., vol. 25, p. 42 Table.
- COAL MINERS' WAGES IN BOHEMIA. Min. & Sci. Press, vol. 87, p. 154. Table.
- WAGE SCALE AT COBALT. M. & M., vol. 27, p. 488.
- WAGE SCALE ROSSLAND, BRITISH COLUMBIA. Min. & Sci. Press, vol. 90, p. 140. Table
- LABOR COSTS IN MINES OF NOVA SCOTIA. Min. & Sci. Press, vol. 91, p. 290.
- LABOR COST IN A CALIFORNIA GOLD MINE. Ore Dressing, Richards, vol. 2, p. 1131. Table.
- WORK AND WAGES IN CALIFORNIA. Min. & Sci. Press, vol. 30, p. 114.  $5\frac{1}{2}$  columns.
- CALIFORNIA AND NEVADA MINING WAGES. E. & M. J., vol. 83, p. 846.  $\frac{1}{2}$  column
- LABOR COST AT OROVILLE, CALIFORNIA. E. & M. J., vol. 78, p. 909 Table.
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- LABOR COSTS AT ALMADEN. Min. & Sci. Press, vol. 37, p. 392. Tables.
- LABOR COSTS AT CAMP BIRD MINE. Sch. Mines Quart., vol. 24, p. 64. Table.
- LABOR COST AT CAMP BIRD MINE, OURAY, COLORADO. T. A. I. M. E., vol. 33, p. 526. Table.
- COMPARATIVE RATES FOR LABOR AT THE MINES OF BOULDER AND CRIPPLE CREEK, COLORADO. T. I. M. E., vol. 19, p. 334.
- LABOR COST AT THE PORTLAND MINE, CRIPPLE CREEK, COLORADO. T. A. I. M. E., Bethlehem Meeting, Feb. 1906, pp. 1326, 1327. Tables.
- FORMER RATES OF WAGES IN ENGLAND. Coll. Working and Management, p. 34. 10 pages. Table.

- PRESENT WAGES IN ENGLISH COAL MINES. Coll. Working and Management, p. 43.
- LABOR COST AT WARDNER, IDAHO. Rept. Zinc Comm., Canada, p. 43.
- LABOR COSTS IN A STAMP MILL IN IDAHO Ore Dressing, Richards, vol. 2, p. 112 Table.
- LABOR COST IN NORTHERN IDAHO. Ore Dressing, Richards, vol. 2, p. 1130. Table.
- LABOR COSTS IN THE MALAY PENINSULA TIN MINES Tin Deposits of the World, pp. 59 and 64. Table.
- LABOR COST IN TIN MINES OF SPAIN Tin Deposits of the World, p. 151 Table.
- LABOR COSTS IN DRESSING TIN ORES AT MOUNT BISCHOFF. Tin Deposits of the World, p. 172.
- WAGE SCALE IN THE JOPLIN REGION M. & M., vol. 28, p. 156. Table.
- LABOR COSTS, MISSOURI LEAD AND ZINC MINES. Ore Dressing, Richards, vol. 2, p. 1129. Table.
- LABOR COSTS IN THE LEAD AND ZINC MINES OF THE JOPLIN DISTRICT. Univ. Geol. Sur. of Kans., vol. 8, pp. 350, 377, etc. Table.
- LABOR COSTS IN THE JOPLIN DISTRICT, MISSOURI E. & M. J., vol. 84, p. 1119.  $\frac{1}{2}$  column.
- COST OF LAKE SUPERIOR AND MONTANA COPPER. By J. R. Finlay E. & M. J., vol. 85, p. 856. 13 $\frac{1}{2}$  columns.
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### Cost of Mining

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- CONDITIONS AND COSTS OF MINING AT THE BRADEN COPPER-MINES, CHILE. By W Braden T A. I. M. E, vol 40, p 743. 3 pages.
- COST OF MINING OPERATIONS: Tye Copper Company, Vancouver Island E. & M. J., vol. 80, p. 744. Table.
- ALLOUEZ MINING COMPANY, MICHIGAN. E. & M. J., vol. 51, p. 382. Table
- COST OF MINING AT CANANEA M & M., vol. 30, p. 29. Table.
- COST AT THE ATLANTIC MINE, LAKE SUPERIOR T I M. & M., vol. 7, p. 20. Table
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- COST OF ALL KINDS OF MINING WORK IN THE LAKE SUPERIOR COPPER MINES. T. A. I. M. E., vol. 6, p. 292.
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- WORKING COSTS IN THE BUTTE COPPER MINES. M. & M, vol. 21, p. 158.  $\frac{1}{2}$  column.
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- WORKING COSTS ON MINES, AS PRACTICED ON THE RAND: Management. By J. A. Dennison. T. I. M. & M, vol. 18, p 108  $24\frac{1}{2}$  pages.
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- WORKING COST AT THE MITCHELL'S CREEK GOLD MINES, NEW SOUTH WALES. T. I. M. & M., vol. 15, pp. 538, 539
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- COST (GENERAL) OF MINES IN WESTERN AUSTRALIA. Gold Min. & Mill., W. Aus., p. 473. 4 pages
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- CHEAP MINING IN AUSTRALIA. Min. & Sci. Press, vol. 78, p. 206.  $\frac{1}{2}$  column.



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- COST OF OPERATIONS AT MOUNT MORGAN MINE Min & Sci. Press, vol. 88, p. 182 Table.
- COSTS OF MINING GOLD ORE AT SARAWAK, BORNEO. T. I. M. & M, vol. 15, pp. 154, 155, 194.
- MINING COSTS IN THE COBALT DISTRICT, CANADA T. I. M. E., vol. 36, p. 591. 1½ pages. Tables.
- COST OF MINING, HANDLING, ETC., THE LE ROI MINING COMPANY: Tamarack Mining Company. E & M. J., vol. 75, pp 526, 527.
- MINING COST PER TON AT LE ROI, BRITISH COLUMBIA. E. & M. J, vol. 88, p. 104. 1½ columns. Table.
- COST OF MINING OPERATIONS IN THE WAR EAGLE AND CENTER STAR MINES, BRITISH COLUMBIA. M. & M., vol. 21, p. 367. Table.
- MINING COST, WAR EAGLE MINE, BRITISH COLUMBIA Min. & Sci. Press, vol. 90, p 268. ¾ column. Tables
- OPERATING EXPENSES AT THE CARIBOO MINE, BRITISH COLUMBIA. Min & Sci. Press, vol. 88, p. 148. Table
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- COST OF MINING AT THE YELLOW ASTER MINE, MOJAVE DESERT. E. & M. J., vol. 77, p. 154. Table.
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- COST OF MINING OPERATIONS, CRIPPLE CREEK, COLORADO. Min. & Sci. Press, vol 88, p. 112. Table
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- COST OF OPERATIONS AT THE REYNOLDS MINE, GEORGIA. T I M. & M., vol. 9, p. 371. Table.
- COST OF MINING IN KOREA Min. & Sci. Press, vol 93, p. 80. Table.
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- COST OF MINING OPERATIONS IN EASTERN OREGON Wages, Stoping, Drifting, Raising, and Timbering M. & M, vol 19, p 15
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- COST OF MINING AT THE STORMONT AND LAST CHANCE MINES E & M. J., vol 29, p 60 Table
- COST OF MINE WORK PER LINEAR FOOT, GRANITE MOUNTAIN MINING COMPANY. E & M J, vol. 44, p. 432. Table.
- COST OF MINING QUARTZ PYRITE GOLD DEPOSITS. By J. R. Finlay E & M. J., vol. 86, p. 512. 18 $\frac{1}{2}$  columns.
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- COST PER TON OF MESABI IRON ORE. Min. & Sci. Press, vol. 67, p 356. Table.
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- See also COST OF TRANSPORTATION.
- COST OF OPERATIONS AT PYRITES MINES. Sch Mines Quart., vol. 7, pp 169 and 166
- COST OF MINING IN SWEDEN. Min. & Sci. Press, vol. 45, p. 358. 1 $\frac{1}{2}$  columns.
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- COST OF MINING ORE AT BUNKER HILL AND SULLIVAN MINE, IDAHO. Min & Sci Press, vol. 97, p 29 Table
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- GENERAL MINING COSTS IN THE NITRATE OF SODA MINES, CHILE. Min. & Sci Press, vol 100, p. 182  $\frac{1}{2}$  column.
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- COST OF MINING OPERATIONS IN THE ANCHOR TIN MINE, TASMANIA E. & M. J., vol. 81, p 1240. Table.
- COSTS OF MINING OPERATIONS AT MOUNT BISCHOFF TIN MINES Tin Deposits of the World, p. 172. Table.
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- MINING COSTS IN THE CAPE COLONY TIN WORKINGS P. C. M. & M. Soc. S A., vol. 8, p. 180. Tables.

MINING COSTS IN RUSSIA: Bogoslovsk Mining Estate. T. A. I. M. E., vol. 39, p. 279, Tables; p. 288, Tables.

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### Cost of Mining and Treatment

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DETAILED COST OF MINING AND MILLING OPERATIONS, STE. GENEVIEVE, MISSOURI. E. & M. J., vol. 34, p. 70. 1 column.

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- COMPARATIVE COSTS OF MINING TREATMENT, ETC., FOR YEARS 1893-1903: Mount Morgan Gold Mining Company. E & M J, vol 76, p p. 435. Table.
- RELATIVE COST OF MINING AND MILLING IN CALIFORNIA Min. & Sci. Press, vol. 73, p 295. Table.
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- COST OF MINING AND MILLING IN NORTHERN CALIFORNIA. Min & Sci. Press, vol. 93, p 286. Table.
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- COST OF MINING AND MILLING, SUMMIT VALLEY DISTRICT, MONTANA. Min. & Sci Press, vol 41, p 98.
- COST OF MINING AND MILLING, BIG INDIAN MINE. Min & Sci Press, vol 87, p 237 Table.
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- COST OF MINING AND TREATMENT AT THE HAILE MINE, VIRGINIA E & M. J, vol 62, p 7. Table.
- COSTS OF MINING AND MILLING AT SANTA FE T. I. M. & M., vol 12, p. 95. Tables.
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- COST OF MINING AND CLEANING THE ORE IN JOPLIN DISTRICT E & M. J., vol 58, p. 392,  $\frac{1}{2}$  column; p 413,  $1\frac{1}{2}$  columns; p. 437, 2 columns; and p. 460,  $1\frac{1}{2}$  columns.
- COST OF MINING AND MILLING BLUE ROCK PHOSPHATE IN TENNESSEE. E. & M. J., vol. 80, p 206.
- COST OF MINING AND CONCENTRATING IN THE ZEEHAN AND DUNDAS SILVER FIELD. T. I. M & M., vol. 4, p 63.
- See also COST OF MINING, COST OF MILLING, and CONCENTRATION.

### Cost of Coal Mining

AN INVESTIGATION OF THE COST OF MINING COAL. By J. R. Finlay. E. & M. J., vol. 87, p. 948.  $10\frac{1}{2}$  columns.

- DETAILED COSTS OF MINING COAL Second Geol. Sur. Pa., AC, pp 359, 360, 362, 363-367.
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- COST IN NARROW AND GOB ENTRY METHODS OF WORKING M. & M., vol. 19, p. 59. Table.
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- COMPARATIVE COST OF LONGWALL AND PILLAR AND STALL METHODS. Coll Engr., vol 9, p 122. Tables.
- COST OF WORKING BY ROOM AND PILLAR SYSTEM WITHOUT GOBBING-UP. T. A I M. E., vol. 2, p 110.
- COST OF COAL MINING. E. & M. J., vol 54, p 241. ¾ column
- EXPENSE OF KEEPING A LARGE COLLIERY IN WORKING ORDER E. & M. J., vol. 73, p. 753.
- PRICE AND PRODUCTION OF COAL E. & M. J., vol. 74, p 672. 1½ columns
- COMPARATIVE COSTS OF THE PILLAR-AND-CHAMBER, PILLAR-AND-CHAMBER RETREATING, AND PANEL SYSTEM RETREATING. M. & M., vol. 27, p 534 Tables
- COMPARATIVE COST OF WORKING AN 18-IN. COAL-SEAM: When Bottom-Cutting Is Used as Gobbing; and Bottom Cutting Is Used as Brick Material. T. I. M. E., vol. 15, p. 61. Table.
- COST OF GETTING COAL. E & M. J., vol. 87, p. 1044. 1 column.
- COST OF USE OF HYDRAULIC MINING CARTRIDGES. T. I. M. E., vol. 15, p. 272. Table.
- COMPARATIVE COSTS OF HYDRAULIC COAL GETTERS AND EXPLOSIVES. M. & M., vol. 27, p. 247. Tables.
- SEE also MECHANICAL MINING APPLIANCES: GETTERS.
- COST OF COAL GETTING E & M J., vol 48, p. 139. Tables
- COST OF MACHINE MINING OF COAL. M. & M., vol. 17, p 315. Table.
- COST OF REPAIRS FOR MACHINE MINING IN VIRGINIA COAL MINES. E. & M. J., vol. 84, p. 408.
- COST OF INSTALLATION AND MINING COAL BY MACHINES. By F. W. Parsons. E. & M J., vol. 82, p. 304. 2 columns.
- COST OF MACHINE-MINING AND PICK-MINING COMPARED T. I. M. E., vol 17, pp. 174, 175, 176
- COSTS OF MACHINE MINING OF COAL. E. & M J., vol. 89, p. 624. 1½ columns
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- COST OF MINING COAL BY MACHINES. Sch. Mines Quart., vol. 9, p. 313. Tables.
- COSTS OF COAL-CUTTING BY MACHINERY. T. F. I. M. E., vol. 11, pp 199, 200.
- COST OF CUTTING COAL BY MACHINE vs. HAND. T. F. I. M. E., vol 1, p. 126, Table; p. 132, Table; p 138, Table.
- ELECTRIC MINING MACHINERY: Some Investigations in Regard to Cost of Operation in Various Mines. By J. N. Bulkley. M. & M., vol. 18, p. 170. 8 columns.
- COST OF ELECTRIC vs. COMPRESSED AIR WORK IN COAL-CUTTING. T. F. I. M. E, vol. 11, pp. 499 and 500. Tables.
- COST OF OPERATING ELECTRIC COAL MINING MACHINES. P. E. Soc. W. Pa., vol. 13, p. 165. Table.
- COST OF ELECTRIC COAL-CUTTING AT THE GLENCELELLAND COLLIERY. T. F. I. M. E., vol. 9, p. 136. Table.
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- COST OF MINING COAL, RED BANK REGION, PENNSYLVANIA. E. & M. J., vol. 18, p. 51. 1 column.

- COST OF MINING COAL IN THE PENNSYLVANIA COAL MINES. Rept Insp. Mines, Pa., 1879, pp. 321 and 323 Tables
- COST OF MINING AT DANVILLE, PENNSYLVANIA. T. A. I. M. E., vol 20, p 384
- COST OF MINING IN SOME PENNSYLVANIA ANTHRACITE COLLIERIES. E & M. J., vol. 45, p. 193. 1½ columns.
- ESTIMATED COST OF ANTHRACITE MINING BY WITHDRAWING. E. & M. J., vol. 48, p. 380. Table
- COST OF ANTHRACITE COAL MINING PER CAR, OR WHEAT THE MINER GETS. E. & M. J, vol. 73, pp 754 and 887.
- COST OF ANTHRACITE MINER'S OUTFIT. The Anthracite Coal Industry, Roberts, p. 112. Table.
- INCIDENTAL WORKING EXPENSES OF ANTHRACITE MINER. The Anthracite Coal Industry, Roberts, p 113. Table.
- COST OF MINING IN THE WYOMING REGION. E. & M. J., vol 17, p 37 2 columns.
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- COST OF RECOVERY OF ANTHRACITE FROM CULM BANKS. E. & M. J, vol. 85, p 720. 2 columns.
- THE COST OF COAL AND IRON IN ALABAMA E & M. J., vol. 57, p. 74. 1½ columns.
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- COST OF MINING OPERATIONS IN INDIA (COAL). T. I. M. E, vol 22, p. 191.
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- COST OF MINING QUICKSILVER.** Min. & Sci. Press, vol. 68, p. 50. Tables.
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- COST OF MINING AT POTOSI, BOLIVIA.** T. A. I. M. E., vol. 19, p. 95.
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- COST OF THE ELMORE VACUUM FLOTATION PROCESS. E. & M. J., vol. 83, p. 1205.  $\frac{1}{2}$  column.
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COST OF VARIOUS FORMS OF AIR COMPRESSORS M. & M., vol. 27, p. 102 Table.

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### Cost of Producing Various Materials

PERCENTAGE SUBDIVISION OF COST OF PRODUCING MINERAL: Cost per Ton; Mining Plant, etc; Labor, Supplies, etc, Timber, Maintaining Workings etc, Milling, etc; and Management, etc. T. A. I. M. E., California Mines and Minerals, p. 64.

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### Cost of Preserving Mine Timber

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**COST OF DRY CRUSHING MILLS.** J. C.  
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**COST OF FINE GRINDING IN WESTERN AUSTRALIA** By W Broodbridge. Min Mag, Feb, 1905, p. 175.

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**COST OF OPERATING TUBE MILLS ON GOLD ORES.** Min. Mag., vol 11, pp. 411, 412, etc.

**COST OF GRINDING BY TUBE-MILLS AT EL ORO, MEXICO.** T. A. I. M. E., vol. 37, p. 23. 1 page Tables

**COST OF TUBE MILL OPERATION** P. C. M. & M Soc S. A., vol 8, p 12. 1 column

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**COST OF REDUCTION OF ORE: Nevada and California** Min. & Sci. Press, vol. 18, p. 345. Table.

**COST OF REDUCTION OF GOLD-ZINC SLIMES.** Min. & Sci. Press, vol. 75, p. 123. Table.

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- COST OF SHAFT SINKING ON THE RAND** T. N. S. I. M. & M. E., vol 10, p. 135.
- NOTE ON THE COST AND SPEED OF SINKING THE EAST SHAFT OF THE NEW KLEINFONTEIN COMPANY, BENONI, SOUTH AFRICA.** By E. J. Way. T. A. I. M. E., vol 35, p. 397. 2 pages.
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- COST OF SHAFT SINKING ON THE RAND.** Witwatersrand Goldfields, pp. 189, 190, 191, 192, 193, 194. Tables.
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- COST OF SHAFT SINKING, LINCOLN MINE, CALIFORNIA.** Min. & Sci. Press, vol. 86, p. 25. Table.
- COST OF SHAFT SINKING ON THE MOTHER LODE, CALIFORNIA.** Min. & Sci. Press, vol. 93, p. 683.
- COST AND RATE OF SHAFT SINKING ON THE MOTHER LODE, CALIFORNIA.** T. A. I. M. E., California Mines and Minerals, p. 166.
- COST OF SHAFT SINKING, CENTRE STAR MINE COMPANY, BRITISH COLUMBIA:** Including Compressed Air, Drill Fittings and Labor. Miner's Pocket Book, Lock, p. 178. Table.
- COST OF SHAFT SINKING:** Transvaal, South Africa Miner's Pocket Book, Lock, pp 208, 209, 210. Table.
- COST OF SINKING DOMINION No. 1 SHAFT.** J. M. Soc. N. S., vol. 3, p 111. Table
- THE COST OF SINKING PLANT, SHAFT SINKING AND LEVEL DRIVING IN THE DEEPEST LODES YET REACHED IN THE GOLD MINES OF NOVA SCOTIA.** By W. L. Libbey. J. M. Soc. N. S., vol. 9, p. 94. 4 pages.
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- COST OF THE SINKING OF THE SHAFTS OF SAINTE MARIE AT PIRONNES.** T. A. I. M. E., vol 5, p. 128.
- COST OF A THREE-COMPARTMENT SHAFT AT FRISCO, IDAHO** Min. & Sci. Press, vol. 94, p. 272.
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- COST OF SHAFT SINKING IN THE TIN MINES OF THE MALAY PENINSULA.** Tin Deposits of the World, p. 58.



**COST OF SHAFT SINKING AT THE EL ORO MINES, MEXICO** Min & Sci. Press, vol. 100, p. 519. Tables

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**COST OF SHAFT SINKING AT BASIN, MONTANA** E. & M. J., vol. 79, p. 1005 Table.

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**COST OF SHAFT SINKING IN WISCONSIN ZINC FIELDS.** E. & M. J., vol. 81, p. 1234. Tables.

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**COST OF COLLIERY SINKING AND EQUIPMENT IN BELGIUM.** T. I. M. E., vol. 31, p. 698. Table.

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## Cost of Signaling

**COST OF COMPRESSED AIR MINE SIGNALING.** Min. & Sci. Press, vol. 85, p. 220 Table

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## Cost of Sizing

**COST OF SCREENING AND CLEANING COAL.** T. F. I. M. E., vol. 1, p. 93.

**COST OF SCREENING AND BANKING COAL, ENGLAND** T. N. S. I. M. & M. E., vol. 10, p. 256. Table.

**COST OF SCREEN CONSTRUCTION.** T. N. S. I. M. & M. E., vol. 10 p. 258. Tables.

See also **KINDS OF SCREENS, ETC.**

## Cost of Sorting

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**COST OF SORTING BY HAND.** Zinc Ores Rept. Zinc Comm., Canada, p. 79.  $1\frac{1}{2}$  pages.

**SAVING DUE TO SORTING AT THE RAND MINES.** Gold Mines of the Rand, p. 156. Table.

**COST OF HAND SORTING ON THE RAND.** E. & M. J., vol. 88, p. 1069. Table.

**COST OF ORE SORTING, SOUTH AFRICA.** Sch Mines Quart., vol. 21, p. 24.

**COST OF SORTING AND CRUSHING ON THE RAND.** Gold Mines of the Rand, p. 260.

**COST OF SORTING ORE AT THE HECLA MINE, COEUR D'ALENE DISTRICT.** E. & M. J., vol. 88, p. 1106. Table.

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**COST OF STOPING ON THE RAND.** P. C. M. & M. Soc S A., vol 9, p. 225. Tables.

**COST OF STOPING, SOUTH AFRICA.** E & M J, vol. 75, p. 597

**COST OF STOPING IN THE WHITE BEAR MINE.** J C. M. I., vol. 11, p. 535. Table

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**COST OF STOPING IN WESTERN AUSTRALIA** Gold Min. & Mill W. Aus., pp. 199, 204, 205, 206, 207, 208. Tables.

**COST OF STOPING IN WESTERN AUSTRALIAN MINES** Gold Min. & Mill W. Aus., p. 507

**COST OF STOPING AT THE GOLDEN HORSESHOE, WESTERN AUSTRALIA.** Gold Min. & Mill W. Aus., p. 616. Table.

**COST OF STOPING AT GALENA, KANSAS.** Univ Geol. Sur. of Kansas, vol 8, p. 343. 1 page.

**COST OF DRIFTING AND STOPING BY HAND AND MACHINES IN COPPER MINES** Min & Sci. Press, vol. 48, p. 304.  $\frac{1}{2}$  column.

See also **COST OF TUNNELING.**

**COST OF STOPING IN TIN MINES, MALAY PENINSULA.** Tin Deposits of the World, p. 58.

**COST OF STOPING AT THE ESPERANZA MINE, MEXICO** Min. & Sci. Press, vol. 99, p. 846. 2 columns. Table.

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**APPROXIMATE YIELD AND COST OF STOPING PER TON OF ORE BROKEN.** Min. & Sci. Press, vol. 71, p. 302. Table.

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### Cost of Supplies

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**COST OF SUPPLIES AT TONOPAH, NEVADA.** E & M. J., vol. 82, p. 107.

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- ESTIMATION OF COST IN CONNECTION WITH TIMBERING. T. A. I. M. E., vol. 7, p. 84. 10 pages.
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- RELATIVE COST OF MAINTAINING THE TIMBER IN ANTHRACITE MINES, PENNSYLVANIA. The Anthracite Coal Industry, Roberts, p. 29.
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- COST OF TIMBER IN MEXICO. T. A. I. M. E., vol. 35, p. 24.
- COST OF MINE TIMBER ON THE RAND—1902. Witwatersrand Goldfields, p. 458. Table.
- COST OF TIMBERING AT LAKE VIEW CONSOLS AND GOLDEN HORSESHOE, WESTERN AUSTRALIA. Gold Min & Mill. W. Aus., pp. 182 and 214. Tables.
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- COST OF PILLARING IN LONGWALL. Coll. Working and Management, p. 94.
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- COST OF PIGSTY SUPPORT IN MINES. P. C. M. & M. Soc. S. A., vol. 7, p. 367.  $\frac{1}{2}$  column.
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- COST OF SHAFT LINING AT THE PIONEER MINE, ELY, MINNESOTA. J. C. M. I., vol. 7, p. 361. Table.
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- COST OF SINKING, RAISING AND TIMBERING SHAFTS, WINZES AND RAISES AT ASHLAND MINE, MICHIGAN. T. L. S. M. I., vol. 9, p. 37. Tables.

- COST OF TIMBERING SHAFT No. 2, TAMARACK. T. L. S. M. I., vol. 7, p. 54.
- COST OF CONCRETE SHAFT LINING Min. & Sci. Press, vol. 89, p. 340. Table.
- COST OF CONCRETE (ELLIPTICAL) SHAFT LINING AT BRIDGEPORT, PENNSYLVANIA M. & M., vol. 27, p. 110 Table
- COST OF MAKING WATERTIGHT A SHAFT LINING WITH CEMENT T. I. M. E., vol. 30, p. 653. Table.
- COST OF CEMENT IN SHAFTING COMPARED WITH BRICK AND IRON. T. F. I. M. E., vol. 4, p. 345
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- COST OF SHAFT TUBBING P. C. M., vol. 2, p. 162 Table.
- See also SHAFT LINING, ETC.
- COST PER TONNAGE OF SQUARE SET TIMBERING. J. C. M. I., vol. 6, p. 136.
- COST OF DOUBLE SET OR DOUBLE TIMBERING PER SET Rept. Insp. Mines, Pa., 1878, p. 232
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- COST OF TIMBERING PER TON OF COAL RAISED. T. I. M. E., vol. 16, p. 239. Table.
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- PRICE OF MINE TIMBER AT OREGON MINES M. & M., vol. 19, p. 15.
- COST OF FRAMED TIMBER TRESTLES. R. R. Construction, Webb, p. 169.  $\frac{1}{2}$  page
- COMPARATIVE COSTS OF WOOD AND STEEL FOR MINE PROPS. M. & M., vol. 27, p. 420
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- COST OF STEEL SHAFT LINING. T. L. S. M. I., vol. 10, p. 164 Table
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- COST OF MASONRY SUPPORT IN ALMADEN MINES Min. & Sci. Press, vol. 37, p. 342 Tables.
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- COST OF TIMBERING IN PANEL AND LONGWALL. Coll. Working and Management, pp. 244-245. Tables.
- COST OF MASONRY RETAINING WALL. J. W. Soc. E., vol. 3, pp. 1319, 1320, 1327, 1328, 1331
- COST OF DODSON CULM PLANT AND OTHERS. M. & M., vol. 18, p. 389. Table.
- COST OF WATER PACKING OF EXCAVATIONS AT A COLLIERY IN SILESIA. E. & M. J., vol. 78, p. 580.
- COST OF FILLING COAL SEAMS WITH CONVEYORS. T. I. M. E., vol. 29, p. 460. Table.

**COST OF FILLING A COAL SEAM.** T. I. M. & M., vol. 15, p. 380. 3 pages.

**COST OF STOWING PER CUBIC YARD FOR 1890, AT COBEZAS DEL PASTO, SPAIN** T. A. I. M. E., vol. 21, p. 100.

**COST OF CULM FLUSHING.** M. & M., vol. 18, pp. 390, 391.

**COST OF HYDRAULIC STOWING IN WESTPHALIA, GERMANY.** T. I. M. E., vol. 37, p. 269. 2½ pages Tables

See also **PACKING MINE WORKINGS, ETC**

**COST OF WORKING BY GOBBING-UP, USING WASTE OF MINE, AND OBTAINING OTHER WASTE FROM THE SURFACE.** T. A. I. M. E., vol. 2, p. 111

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### Cost of Surveying

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**COST OF PATENTING MINING CLAIMS.** Min. & Sci. Press, vol. 95, p. 612. ½ column. Table.

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**TABLE OF FEES FOR MINERS' CERTIFICATES, ETC, IN CANADA.** Rept. Zinc Comm., Canada, pp. 371 and 375. Table.

**COST OF LICENCES ON THE RAND:** Prospectors' and Diggers' Licences. T. N. S. I. M. & M. E., vol. 10, p. 143.

**SURVEYS AND ENGINEERING EXPENSES.** R. R. Construction, Webb, p. 394.

**COST OF A COLLIERY SURVEY** M & M, vol. 30, p. 96 ½ column Table. p. 159 3¼ columns.

See also **UNDERGROUND SURVEYS.**

**COST OF MAKING A COLLIERY MAP.** M & M, vol. 30, p. 159. Table.

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### Cost of Trammig

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**COST OF TRAMMING ON THE RAND.** Witwatersrand Goldfields, p. 298. Table.

**COST OF TRAMMING ORE, WESTERN AUSTRALIA.** Gold Min. & Mill W. Aus., pp. 161, 616 Tables.

**COST OF TRAMMING AT THE PORTLAND MINE, CRIPPLE CREEK, COLORADO.** T. A. I. M. E., Bethlehem Meeting, Feb., 1906, p. 1327 Table

**COST OF TRAMMING ("PUTTING") IN ENGLISH COAL MINES.** Coll Working and Management, p. 82 Tables.

See also **CABLEWAYS, ETC., and TRAMMING AND MUCKING.**

### Cost of Operating Tramways

**COST OF TRAMWAY.** E & M. J., vol. 76, pp. 269, 308.

**COST OF TRANSPORTING ORE BY ROPEWAY.** Min. & Sci. Press, vol. 72, p. 141.

**COST OF ROPE TRAMWAYS PER RUNNING FOOT.** E & M. J., vol. 76, p. 513.

**COST OF OPERATING TRAMWAYS.** E & M. J., vol 76, p. 515

**APPROXIMATE PRICE LIST OF WIRE-ROPE TRAMWAYS ON THE ENDLESS ROPE SYSTEM** Aerial or Wire-Rope Tramways, p. 194. Table.

**ESTIMATING COST OF TRAMWAYS.** Aerial or Wire-Rope Tramways, pp 108, 113, 148, 167, and 196. Tables

**COST OF TRANSPORTATION BY ROPE-WAY AT THE PIERREFITTE MINES, FRANCE.** T. A. I. M. E., vol. 39, p. 390  $\frac{1}{2}$  page.

**COST OF MINING AND CONVEYANCE OF ORE.** By Bleichert Rope System at Somorostro, Mexico. Min. & Sci. Press, vol. 39, p. 215 Table.

**COST OF TRANSPORTING ORE ON THE BLEICHERT TRAMWAY AT THE SMUGGLER-UNION MINE, TELLURIDE, COLORADO.** T. A. I. M. E., vol 26, p. 458.

**COST OF CONSTRUCTION OF A TRAMWAY, WHICH HAS 38 BUCKETS, WEIGHT 500 LBS. EACH, TOTAL CAPACITY 5000 TONS PER MONTH.** T. A. I. M. E., vol. 26, p. 458.

**COST OF OPERATING HALLIDIE WIRE-ROPE TRAMWAYS.** Aerial or Wire-Rope Tramways, pp. 99, 100, 108, 113, 137. Table

**COST OF OPERATING THE BLEICHERT WIRE-ROPE TRAMWAY.** Aerial or Wire-Rope Tramways. pp. 137, 147, 157, 163, 167, 171.

**COST OF CONSTRUCTION AND EQUIPPING THREE MILES OF HALLIDIE'S CABLE RAILROAD, DOUBLE-TRACK.** Min. & Sci. Press, vol 43, p. 157. Tables

**HANDLING ORE AT THE COEUR D'ALENE MINES BY TRAMWAYS.** T. A. I. M. E., vol. 33, p. 270.  $\frac{1}{2}$  page.

**COST OF OPERATING CABLEWAY AT CHICAGO CANAL.** The Mechanical Handling of Material, p. 217.

See also CABLEWAYS, ETC.

### Cost of Transportation

**COST OF NARROW-GAUGE RAILROAD CONSTRUCTION AND OPERATION.** Min & Sci Press, vol 92, p. 101.  $\frac{1}{2}$  column.

**COMPARATIVE COST OF NARROW-GAUGE RAILROADS.** Min. & Sci. Press, vol. 21, p. 27.  $\frac{1}{2}$  column.

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**COST OF A NARROW-GAUGE RAILROAD AT MOJADA, MEXICO** T. A. I. M. E., vol 15, p. 568.

**COST OF RAILROAD MAKING PER MILE FOR SEVERAL YEARS.** T. F. I. M. E., vol. 8, p. 451.

**COST OF CONSTRUCTING A RAILROAD OF GIVEN LENGTH, ETC.** M. & M., Apr., 1902, p. 424.

**COST OF CONSTRUCTION OF NARROW-GAUGE RAILROAD.** Min. & Sci. Press, vol. 38, p. 194. Table

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**COST OF STOPPING A TRAIN.** Min & Sci. Press, vol. 70, p. 264.  $\frac{1}{2}$  column.

**COST OF POWER FOR TROLLEY CARS.** Min. & Sci Press, vol. 75, p. 101.  $\frac{1}{2}$  column.

**COST OF OPERATING LOCOMOTIVES.** Min. & Sci. Press, vol. 38, p. 351.  $\frac{1}{2}$  column.

**WHAT RAILROAD TRAINS CAN BE RUN FOR.** Min & Sci. Press, vol 51, p. 263  $\frac{1}{2}$  column.

**COST OF MOVING RAILROAD TRAINS.** Min. & Sci. Press, vol 51, p. 418.  $1\frac{1}{2}$  columns.

**COST OF MAINTENANCE, REPAIRS, MOTIVE POWER, AND TOTAL OPERATING EXPENSE OF ENGLISH AND AMERICAN RAILROADS.** E. & M. J., vol 42, p. 38, table; p. 218. Table.

**ESTIMATING WORKING COST OF OPERATING A RAILROAD.** E. & M. J., vol.

- 30, p. 410, 2½ columns; p 380, 1 column, p 128, 1½ columns
- SPEED COST IN ATLANTIC STEAMERS. E & M. J., vol. 42, p 205 ½ column.
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- COST: Loss of Shipping Concentrates Min & Sci. Press, vol 93, p. 139.
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- COST OF RAILROAD TRANSPORTATION. R. R. Construction, Webb, p. 402. ½ page
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- THE COMPARATIVE CONDITIONS AND COSTS OF TRANSPORT BY RAILROAD AND CANAL By J S. Jeans T F. I. M. E., vol. 8, p. 432. 10 pages.
- COST OF TRANSPORT BY RAILROAD AND CANAL, ENGLAND T. N. S I M. & M. E, vol. 9, p. 344. Table.
- COST OF RAILROAD TRANSPORT PER TON PER MILE. T. F. I M. E., vol 8, pp. 453, 454.
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## MINE DRAINAGE

### Drainage in General

**CURRENT PUMPS FOR MINING.** By F. Reed. M. & M., vol. 30, p. 653. 3½ columns. I.

**DIVERTING WATER IN A WET SHAFT.** By A. D. Cox. M. & M., vol 30, p. 415. ½ column. I.

**PUMPING DURING SHAFT SINKING.** M. & M., vol. 30, p. 404. 5 columns. I.

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### Pumps for Mine Use

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**PUMPING AT BISBEE, ARIZONA.** By C. C. Austin. M. & M., vol. 31, p. 132. 4 columns. I.

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**WATER RINGS IN THE FILBERT SHAFT, PENNSYLVANIA.** M. & M., vol. 30, p. 560. ¾ column. I.

**WATER-RINGS FOR CIRCULAR SHAFTS.** T. I. M. E., vol. 38, p. 25. ¼ page.

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**Cornish Pumps**

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**UNWATERING SHAFT BY COMPRESSED AIR** By L. Boudoire. E. & M. J., vol. 90, p. 848. 1½ columns. I.

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**Vacuum Pumps**

**THE VACUUM-PUMP IN THE CYANIDING OF SAND.** By W. A. Caldecott. Min. & Sci. Press, vol. 98, p. 316. 1½ columns.

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**EXPERIMENTS WITH TWO ELECTRICALLY-DRIVEN PUMPS.** By T. L. Galloway. T. I. M. E., vol. 36, p. 82. 11 pages.

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# DRILLING AND BORING

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HISTORY OF THE ROCK DRILL. By W. L. Saunders. Min. & Sci. Press, vol. 100, p. 735. 2 columns.

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**PRACTICAL EXPERIENCE IN MINING.** By J. P. Channing. Sch. Mines Quart., vol. 31, p. 384. 2½ pages.

**FIELD WORK IN CIVIL ENGINEERING AT IOWA STATE COLLEGE.** By A. Marston. P. Soc. P. E. E., vol. 12, p. 131. 28 pages. I.

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**NORTHERN TERMS.** By T. A. Rickard. Min. & Sci. Press, vol. 97, p. 702. 3 columns.

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**SKETCHING: Its Use in Engineering.** By W. Truran. Min. Mag, London, vol. 2, p. 124. 2 columns. I.

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**THE CARAT: Unit of Weight for Precious Stones.** Min. Mag, London, vol. 2, p. 296. 1 column.

**THE CARAT WEIGHT.** By E. J. Valentine. Min. & Sci. Press, vol. 96, p. 602. ½ column.

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**METHOD OF SPECIFIC GRAVITY DETERMINATION.** By A. C. Dart. Min. & Sci. Press, vol. 100, p. 529. 1 column.

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**MELTING POINTS OF ELEMENTS.** P. C. M. & M. Soc S. A., vol. 7, p. 297. 2 columns. Table.

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### **Occurrence of Copper and Copper Ores**

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- COLOMBIAN GOLD PLACERS T. A. I. M. E., vol. 39, p. 418. 1 page. Table
- PRIMARY GOLD IN COLORADO GRANITE. By J. B. Hastings. T A I. M. E., vol. 39, p. 97. 6 pages. I.
- LESSONS FROM GILPIN COUNTY PRACTICE By G. E. Collins. Min & Sci. Press, vol. 101, p. 366. 11½ columns.
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- REPORT ON THE POVERTY GULCH MINE. By C. W. Henderson. M. & M., vol. 31, p. 586, 5½ columns, I; p. 694, 7 columns, I.
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- GOLD MINING INDUSTRY IN THE DUTCH EAST INDIES. By E. A. Winton. E & M J., vol. 88, p. 513. 4½ columns. Map.
- OCCURRENCE OF AURIFEROUS AND STANIFEROUS TOURMALINE IN SUMATRA. By L. Hundeshagen. E. & M. J., vol. 87, p. 1003. ½ column.
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- LAS PILARES MINE, SONORA, MEXICO.** By E. M. Robb. M. & M., vol. 31, p. 106. 11½ columns. I.
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HUMIDITY, ITS NECESSITY AND BENEFITS. By W. W. Brand. Heating and Ventilating Magazine, July, 1910.

PROTECTIVE VALUE OF HUMIDITY. By J. Ashworth. M. & M., vol. 31, p. 108.  $3\frac{1}{2}$  columns.

CONDITIONS IN MINES LEADING TO EXPLOSIONS. Col. Eng., vol. 9, p. 112.

HUMIDITY IN VENTILATION; EFFECT ON COAL DUST. By Sir W. Galway. Col. Guard., June 25, 1909, p. 1271.

UNDERGROUND HUMIDITY IN THE COMSTOCK MINES, NEVADA. T. A. I. M. E., vol. 41, p. 43. 4 pages. D.

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**FORMULAS AND TABLES TO FACILITATE THE CONSTRUCTION AND USE OF MAPS.** By R. S. Woodward. U. S. G. S., Bull. 50. 124 pages. 1889.

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- METALLURGY OF BROKEN HILL, NEW SOUTH WALES** By G. W. Williams. E. & M. J., vol. 86, p. 893. 14 columns.
- METALLURGICAL TREATMENT OF MOUNT MORGAN ORES** By J. B. Wilson. E. & M. J., vol. 87, p. 838. 6 columns. I.
- METALLURGICAL PRACTICE IN WESTERN AUSTRALIA.** By A. E. Drucker. Min. & Sci. Press, vol 101, p 401. 9 columns. I.
- METALLURGY ON THE RAND.** By H. G. Nichols. Min. Mag., London, vol 3, p 44. 2½ columns. I.
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See also Metallurgy of the Various Metals Under Their Respective Heads and Cost of METALLURGICAL TREATMENT.

### **Metallurgical Works**

**THE HENNIG TESTING PLANT AND METALLURGICAL LABORATORY.** E. & M. J, vol 86, p. 1198. 4 columns I.

**THE USES AND ABUSES OF SMALL SMELTING PLANTS.** By H. Lang. E. & M J, vol. 89, p. 455 9½ columns.

**THE LOCATION OF SMELTING WORKS** By R R Moore. E & M J, vol. 85, p. 546. 2 columns.

**THE MOUNT MORGAN METALLURGICAL WORKS.** By G. W. Williams E & M. J, vol 87, p. 802. 12 columns. I.

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**PINE CANYON SMELTER, UTAH** Min. & Sci Press, vol 100, p 639 2 columns. I.

### **Methods of Assaying, Calculations, Etc.**

**SOME NOTES ON ASSAYING** P C. M & M Soc S A, vol 7, p 270. 3 columns.

**MOISTURE AS A SOURCE OF ERROR IN ASSAY REPORTS** By G A James E & M J, vol 90, p 1047. 1½ columns.

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**LABOR-SAVING APPLIANCES IN THE ASSAY LABORATORY.** By E Keller. E. & M J., vol. 90, p. 706. 3½ columns. I.

**A PORTABLE ASSAY-OUTFIT FOR FIELD-WORK.** By S K. Bradford. T. A. I. M E., vol 41, p 561. 7 pages.

**ROUTINE ASSAYING ON THE RAND** By A. Whitby. P. C M & M. Soc. S. A, vol. 6, p. 264, 18½ columns, I; p. 342, 5½ columns, p 367, 3½ columns, I; vol 7, p 10, 1 column; p. 33, 5½ columns.

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**A PORTABLE ASSAY FURNACE.** By J. J. Gilho T. Au. I. M. E, vol. 10, p. 270. 5½ pages. I.

- LABOR-**SAVING APPLIANCES IN THE ASSAY-LABORATORY** By E Keller. T. A. I. M. E., vol. 41, p. 786. 2 pages. I.
- TWO PORTABLE ASSAY FURNACES. By E. W. Buskett E & M. J., vol. 85, p. 1150. 2 columns I.
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- ACCURACY IN ASSAYS AND ANALYSES. By J. W. Howson Min. & Sci. Press, vol. 99, p. 329. 6 columns.
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- METHOD OF PLOTTING MINE-ASSAYS. By E H Nutter Min. & Sci. Press, vol. 98, p. 727. ½ column D
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- NOTE ON THE INFLUENCE OF FINE CRUSHING ON THE ASSAY VALUE. By A. Whitby. P. C. M. & M. Soc. S. A., vol. 5, p 95, 3½ columns; vol. 6, p. 21, 1½ columns
- GRADING ASSAYS AND GRINDING EFFICIENCIES. By A Yates. P. C. M. & M. Soc. S. A., vol. 9, p. 187, 7½ columns; p. 238, 2 columns; p 346, 3 columns; p. 395, 1½ columns
- A FURTHER NOTE ON THE INFLUENCE OF FINE CRUSHING AND FUSION ON THE ASSAY VALUE. P C M & M. Soc S. A., vol. 6, p. 21. 1½ columns.
- See also FINE CRUSHING BY MILLS, ETC.
- MOUNT MORGAN MINE RECORDS AND ASSAY PLANS. By J. B Wilson E & M J, vol. 89, p. 710. 8 columns I
- CUPELLATION EXPERIMENTS: The Thermal Properties of Cupels By C. O Bannister T I M. & M., vol. 18, p. 439 27 pages I
- CUPELLATION OF SILVER E & M. J., vol 86, p. 326. 2½ columns
- TEMPERATURE DURING CUPELLATION. E. & M J, vol. 88, p 919 1½ columns.
- EXPERIMENTS WITH PORTLAND CEMENT CUPELS By T. P Holt and N. C Christensen E & M. J, vol. 90, p 560. 5½ columns. D.
- CEMENT VS. BONE-ASH CUPELS By J. W Merritt Min. & Sci. Press, vol. 100, p. 649. 2 columns. I.
- See also CEMENT AND CONCRETE, ETC.
- NOTES ON SMELTING AND CUPELLATION. By F. L Piddington P C. M & M. Soc. S A., vol 5, p 8. 1½ columns.
- IMPROVEMENTS IN THE APPLICATION OF WATER COOLED TESTS FOR CUPELLATION. By E. A. Weinberg. T. Au. I. M. E., vol. 7, p. 167. 2 pages. I.
- VOLATILIZATION OF LEAD AND SILVER IN CUPELLATION By D M. Liddell. E & M. J., vol 89, p 1264. 1½ columns.
- ON CUPELLATION AND PARTING IN ORE ASSAYING. By T K. Rose P. C. M. & M. Soc S A., vol. 5, p 165, 5 columns, I, p 237, 3 columns; p. 256, 7 columns, vol. 6, p. 49, 1 column.
- A CHEAP PLATINUM PARTING APPARATUS. P C. M & M. Soc. S A., vol. 9, p. 256. 5 columns. I.
- COMPARISON OF THE THERMAL PROPERTIES OF CUPELS By C. O. Bannister and W. N. Stanley. E. & M. J, vol 88, p. 1167. 8½ columns.

- CONSTRUCTION AND MANIPULATION OF A GASOLINE ASSAY-FURNACE** By W. E. Dartow Min. & Sci. Press, vol 95, p. 749. 3½ columns I
- ASSAYING SULPHIDE ORE.** By F. G. Hawley. E. & M. J., vol 89, p. 1221. 2 columns.
- ASSAY OF BATTERY CHIPS AND SCREENS** By L. J. Wilmoth. P. C. M. & M Soc. S. A., vol 8, p 230, 5 columns; p 343, 4 columns; p 378, 2½ columns.
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- ANALYTIC WORK AT COPPER QUEEN SMELTER** Min. & Sci. Press, vol 101, p 147. 2½ columns.
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- SAMPLING AND ASSAYING THE COPPER ORES OF THE ELY DISTRICT** By R. Marsh. Sch. Mines Quart., vol. 30, p. 91. 6½ pages.
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- BEHAVIOR OF TELLURIUM IN ASSAYING** E & M. J., vol 87, p. 1176 1½ columns.
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- THE ASSAY OF TELLURIDE ORES.** By G. T. Holloway and E. B. Pearce. T. I. M & M., vol 17, p. 171 40 pages
- STANDARDIZATION OF BULLION ASSAYS.** M. & M., vol. 31, p. 690. 1½ columns
- THE INDIAN MINT ASSAY OF SILVER BULLION.** By F. T. C. Hughes. T. I. M & M., vol 17, p. 334 16 pages I.
- THE ASSAY AND VALUATION OF GOLD BULLION.** By F. P. Dewey. T. A. I. M. E., vol 40, p. 780. 18 pages
- NOTES ON THE ASSAY OF GOLD BULLION.** By T. K. Rose. P. C. M. & M. Soc. S. A., vol 6, p 36, 5 columns; p. 161, 1½ columns; p. 192, 1 column; p. 248, 2 columns.
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THE EFFECT OF HIGH LITHARGE IN THE CRUCIBLE ASSAY FOR SILVER By R. W. Lodge. T. A. I. M. E., vol. 38, p. 638. 5½ pages.

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EXPERIMENTS IN FIRE ASSAYING AT THE REDJANG LEBONG MINE, SUMATRA By G. B. Hogenraad. P. C. M. & M. Soc. S. A., vol. 8, p. 73, 10 columns; p. 150, 2 columns; p. 187, 1½ columns; p. 304, 2½ columns; p. 380, 3 columns.

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See also DEFINITIONS AND TERMS

See also WEIGHTS AND MEASURES and CONCENTRATION

### **Metallurgy of Copper**

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SECTIONAL SLAG POT. By E. C. Ruder. M. & M., vol. 31, p. 149. ½ column I.

THE KILNER MATTE TAPPING CAR. By F. T. Havard. E. & M. J., vol. 87, p. 1294 3 columns. I.

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- A MATTE-SEPARATING FOREHEARTH.** By E Jacobs E. & M. J., vol 87, p 1232. 2 columns. I
- MATTE SMELTING AT DENVER** By H F Bain Min. & Sci Press, vol 100, p. 250 8 columns I.
- KELLEY SLAG AND MATTE CASTING MACHINE** By F. G. Kelley E. & M J, vol 86, p 610. 4 columns I
- MATTE SMELTING AT INGOT, CALIFORNIA** By W. B. Bretherton. E & M J, vol. 85, p. 443 6 columns. I.
- METHOD OF HANDLING MATTE AT SELBY, CALIFORNIA** By J. C Bennett. E. & M. J., vol. 85, p 252. 4 columns I
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- THE PRODUCTION OF CONVERTER-MATTE FROM COPPER-CONCENTRATES BY POT-ROASTING AND SMELTING** By E A Packard T. A I M E., vol. 38, p 633. 4½ pages.
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- SINTERING OF COPPER ORES** By W. G Perkins Min. Mag., London, vol 2, p. 209. 6½ columns.
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- METAL LOSSES WITH ORE OF LOW COPPER CONTENT** By C. A. Heberlein E. & M. J., vol. 89, p. 617. 2½ columns.
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- THE CONSTITUTION OF FERRO-CUPROUS SULPHIDES** By H O. Hofman, W. S. Cayless and E. E Harrington. T. A. I M. E., vol 36, p 142 12 pages. I
- THE NEILL PROCESS AT COCONINO, ARIZONA** By J. W. Neill E. & M. J, vol 85, p 556 2½ columns
- THE NEILL PROCESS AT COCONINO, ARIZONA: Leaching with Sulphur Dioxide** E & M. J., vol. 85, p. 152 1½ columns
- THE JUMAN COPPER LEACHING PROCESS** E. & M J., vol. 86, p 132. 1½ columns
- COPPER LEACHING PLANT IN THE URAL MOUNTAINS.** By A L Simon. T. I M. & M., vol 19, p 212, 30 pages, I; p. 244, 18 pages
- PRECIPITATION OF COPPER FROM BUTTE MINE WATER.** By C J Stose E. & M. J., vol. 87, p 953 5½ columns. I.
- COPPER LEACHING IN THE URAL MOUNTAINS.** E. & M J., vol 89, p 461 1½ columns
- PRECIPITATION OF COPPER FROM CUPFEROUS WATERS.** By F. H. Probert. Min. & Sci. Press, vol. 96, p. 27. 5½ columns. I.

- A COPPER PRECIPITATING PLANT By H. W. Chittenden. E. & M. J., vol. 86, p. 853. 4½ columns.
- THE OUTLOOK FOR HYDROMETALLURGY OF COPPER. By W. E. Greenswalt. E. & M. J., vol. 90, p. 960. 9 columns.
- CONSTRUCTION OF 100-TON COPPER SMELTING PLANT. By C. C. Christensen. E. & M. J., vol. 86, p. 847. 10½ columns.
- THE WASHOE REDUCTION WORKS. M. & M., vol. 30, p. 520. 6½ columns. I.
- THE GREAT COBAR SMELTING WORKS. E. & M. J., vol. 85, p. 950. 15½ columns. I.
- WALLEROO AND MOONTA COPPER MINES AND SMELTERY. By G. W. Williams. E. & M. J., vol. 88, p. 54. 14½ columns. I.
- SMELTING WORKS OF TEZINTLAN COPPER COMPANY. By A. van Zwabenburg. E. & M. J., vol. 90, p. 169. 10 columns. I.
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- THE SMELTER OF THE MAMMOTH COPPER MINING COMPANY, AT KENNETT, CALIFORNIA. By D. F. Campbell. Min. & Sci. Press, vol. 96, p. 30. 3½ columns. I.
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- THE GRANBY SMELTER EQUIPMENT. By B. L. Sackett. M. & M., vol. 30, p. 524. 8½ columns. I.
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- RECENT DEVELOPMENTS AT THE GRANBY SMELTER. By F. E. Lathe. J. C. M. I., vol. 13, p. 273. 15 pages. I.
- CANANEA ORE-BEDDING SYSTEM. By R. L. Herrick. M. & M., vol. 30, p. 65. 9½ columns. I.
- CANANEA FURNACE PRACTICE. By C. De Kalb. Min. & Sci. Press, vol. 101, p. 9. 6½ columns. I.
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- THE DOUGLAS COPPER SMELTER AT FUNDICION, MEXICO. By P. E. Barbour. E. & M. J., vol. 85, p. 303. 9 columns. I.
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- PRESENT CONDITION OF THE GARFIELD SMELTING WORKS. By L. S. Austin. Min. & Sci. Press, vol. 99, p. 590. 2½ columns.
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- THE SMELTERS AT ANACONDA. By E. P. Mathewson. E. & M. J., vol. 86, p. 130. 2 columns.
- THE TAKILMA SMELTER, OREGON. By Geo. Crevar. E. & M. J., vol. 85, p. 365. 1½ columns.
- MINING AND SMELTING AT CERRO DE PASCO, PERU. By C. C. Sample. E. & M. J., vol. 85, p. 206. 12 columns. I.
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- SMELTING AT NISHNI TAGIL IN THE URAL MOUNTAINS. By F. W. Draper. E. & M. J., vol. 90, p. 610. 9 columns.

- COPPER SMELTING IN TENNESSEE** By J. P. Channing. Min & Sci. Press, vol 96, p. 97 1½ columns.
- MINING AND SMELTING IN THE DUCK-TOWN DISTRICT** By E. Higgins. E. & M J., vol 86, p 1237 12½ columns I
- NOTES ON THE METALLURGY AT COPPERHILL, TENNESSEE** By G. A. Guess E. & M. J., vol. 90, p. 866. 2½ columns.
- THE TINTIC SMELTER** By L. A. Palmer M. & M., vol. 29, p. 535. 3½ columns I.
- THE TYEE SMELTER.** By R. L. Phelps. Min & Sci. Press, vol 95, p. 782. 3½ columns. I
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- YAMPA SMELTER, BINGHAM, UTAH.** By L. A. Palmer Min & Sci Press, vol 99, p. 225. 6½ columns I
- THE YAMPA SMELTER AT BINGHAM, UTAH.** By L. A. Palmer. M. & M., vol 31, p. 14. 8½ columns I
- THE INTERNATIONAL SMELTERY AT TOOELE, UTAH.** E. & M J., vol 90, p. 1059. 6½ columns. I.
- THE NEW INTERNATIONAL SMELTERY AT TOOELE, UTAH.** By J. Tyssowski. E. & M. J., vol. 89, p. 865. 7 columns. I.
- THE TOOELE SMELTER.** By C. M. McGregor. M. & M., vol. 31, p. 321. 5½ columns. I
- NOTES ON COPPER SMELTING IN THE WEST.** By E. D. Peters. E. & M. J., vol. 88, p. 735. 4 columns.
- See also CONCENTRATION, and THE COPPER TRADE, also COST OF METALLURGICAL TREATMENT.
- Blast Furnace Smelting of Copper**
- PRACTICAL BLAST FURNACE MANAGEMENT** By Randolph Bolling. E. & M. J., vol. 85, p. 989. 8 columns. I.
- BLAST FURNACE PROGRESS.** By J. Birkinbine. U S G S, Mineral Resources, 1883 and 1884, vol. 14.
- A BLAST FURNACE OF OVAL SECTION.** E. & M J., vol 87, p 853 3½ columns. I.
- SOME MODIFICATIONS IN BLAST FURNACE CONSTRUCTION** By J. Kennedy. P. E. Soc. W. Pa., vol. 23, p. 1. 14 pages. I
- BLAST FURNACE STOCK-HANDLING AND CHARGING APPARATUS** By W. H. Graham J. M Soc N. S., vol. 15, p. 107 4 pages. I.
- ON THE USE OF RAW COAL IN BLAST FURNACES** Min. Mag., vol 8, p 1.
- TOPS OF COPPER BLAST FURNACES.** By N H. Emmons. T. A. I. M. E., vol 41, p. 723. 10 pages I.
- CIRCULAR COPPER BLAST FURNACES.** By T. E. Lambert. M. & M., vol. 31, p 20. 6½ columns. I.
- ALUMINA IN COPPER BLAST FURNACE SLAGS.** E. & M. J., vol. 86, p 1262. 5 columns.
- ROLE OF ALUMINA IN COPPER BLAST FURNACE SLAGS** By L. G. Smith. E. & M J., vol 90, p 1260 5½ columns.
- NEW COPPER BLAST FURNACES AT TEZINTLAN SMELTERY.** By C. Robinson E. & M J., vol 88, p. 655 4 columns I.
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- THE CANANEA BLAST FURNACE** By C. F. Shelby. E. & M. J., vol 85, p. 841. 16 columns. I.
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### **Pyritic Smelting of Copper**

THE DEVELOPMENT OF PYRITIC SMELTING. By R. C. Sticht T. A. I. M. E., vol. 11, p. 1 70 pages.

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### **Refining of Copper**

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**Electro-Metallurgy**

**ELECTRIC SMELTING OF ORE AT HEROULT, CALIFORNIA.** By J. Tysowski. E. & M J., vol. 90, p. 269. 8½ columns. I

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**Metallurgy of Gold and Silver**

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**THE METALLURGICAL TREATMENT OF THE SULPHO TELLURIDE ORES OF KALGOORLIE, WITH SPECIAL REFERENCE TO EXPERIMENTS CONDUCTED AND SULPHIDE MILL ERECTED ON THE ASSOCIATED GOLD MINES OF WESTERN AUSTRALIA, LIMITED.** By L. W. Grayson T. Au I. M. E., vol. 7, p. 170, 20 pages; vol. 8, pt. 1, p. 114, 13 pages

**EXTRACTION OF GOLD BY HYPOSULPHITE OF SODIUM, AND ROASTING ORE FOR CYANIDING** By E. Janitzky. T. Au I. M. E., vol. 7, p. 99. 3 pages.

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**Smelting Gold and Silver**

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**CALCULATION OF A SILVER-LEAD BLAST FURNACE CHARGE.** By J. A. Barr. Min. & Sci. Press, vol. 101, p. 672, 3 columns; p. 710, 3 columns.

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**METALLURGICAL CONDITIONS AT COBALT, ONTARIO, CANADA, 1908.** By F. N. Flynn. J. C. M. I., vol. 11, p. 293. 42 pages.

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**THE REDUCTION OF AURIFEROUS ORES.** By C. F. Stansbury. Min. Mag., vol. 2, p. 239. 5½ pages.

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**Cyaniding, Processes, Theory, Etc.**

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- ASSISTING THE SOLUTION OF GOLD IN THE CYANIDE PROCESS BY COMPRESSED AIR. By A F Crosse P. C M & M Soc. S A., vol 8, p 36. 1 column
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- CYANIDE LIXIVIATION BY AGITATION. By W M. Brodie. E. & M J, vol 87, p. 695. 3½ columns I.
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- BEGINNINGS OF CYANIDATION. By J. McCombie Min Mag. London, vol. 4, p 456 2 columns
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- ELECTROCHEMISTRY OF SOLUTION OF GOLD IN POTASSIUM CYANIDE. P. C. M. & M Soc. S. A., vol. 10, p 21. 2½ columns.
- CONTINUOUS COLLECTION OF SAND FOR CYANIDING By W. A. Caldecott. Min. & Sci. Press, vol. 99, p. 659. 4 columns
- THE CONTINUOUS COLLECTION OF SAND FOR CYANIDING. By W. A. Caldecott. P. C. M. & M. Soc. S A., vol. 10, p. 43, 2½ columns, I; p. 142, 2 columns; p 238, 2½ columns.
- SAND COLLECTING AND WASHING. P. C. M. & M. Soc. S. A., vol. 8, p. 391. 1½ columns.
- See also SAND TREATMENT.
- NOTES ON THE PRECIPITATING EFFECTS OF SUBSTANCES CONTAINING VARIOUS FORMS OF CARBON AND CELLULOSE ON CYANIDE SOLUTIONS CONTAINING GOLD AND SILVER. By A. J. Clark and W. J. Sharwood. P. C M & M Soc. S. A., vol. 10, p. 234, 8 columns, p. 405, 1 column.
- PRECIPITATION FROM CYANIDE SOLUTIONS BY ZINC SHAVINGS AND DUST: A Comparison of Results and Costs. By A. J. Clark. P. C. M & M. Soc. S A., vol 9, p. 222, 3 columns; vol. 10, p. 205, 3 columns
- EXPERIMENTS ON THE PRECIPITATION OF GOLD FROM CYANIDE SOLUTION BY CARBON IN LIME By E. H Croghan. P C M & M Soc. S. A., vol 10, p. 391 5 columns
- PRECIPITATION OF GOLD BY CARBONACEOUS MATTER By W A. Caldecott. Min & Sci. Press, vol. 98, p. 828. 1½ columns.
- ZINC BOX WHITE PRECIPITATES. By R F Coolidge. Min & Sci Press, vol 99, p 394 4 columns.
- ELECTRICAL PRECIPITATION FROM CYANIDE SOLUTIONS. E. & M. J, vol. 89, p. 598. 1½ columns
- ELECTROLYTIC PRECIPITATION. By M. R Lamb E & M J, vol 87, p 705. 2 columns.
- PRECIPITATION OF GOLD AND SILVER BY SOLUBLE SULPHIDES E. & M. J., vol. 87, p. 841. 1½ columns
- NOTES ON PRECIPITATION. By M. Smith. P. C. M. & M, Soc S. A., vol 9, p. 300. 4½ columns; p 351, 1½ columns.
- ZINC DUST PRECIPITATION. By A. J. Clark. Min. Mag London, vol. 4, p. 289. 7½ columns. I.
- ZINC DUST PRECIPITATION AT THE HOMESTAKE MINE. By R Linton. E. & M. J, vol 88, p 199. 1½ columns.
- ZINC DUST PRECIPITATION AT CERRO-PRIETO By R. Linton. P. C. M. & M Soc. S A, vol 10, p. 60. 2½ columns.
- ZINC DUST PRECIPITATION AT MERCUR, UTAH. E. & M. J., vol 86, p. 79. 1 column.
- ZINC DUST PRECIPITATION AT CERRO-PRIETO. By Robt Linton P. C. M. & M. Soc. S. A., vol. 9, p 74, 5 columns; p. 165, 3 columns, p. 207, 1½ columns; p 232, 1 column.

- ZINC BOX PRECIPITATION AT PARRAL,** Mexico E & M J. vol 86, p. 122. 1½ columns
- THE "WHITE PRECIPITATE" OF THE PRECIPITATING BOXES IN THE CYANIDE WORKS** By A. Prister P. C. M. & M. Soc. S. A., vol 5, p. 62, 1 column, p 75, 8 columns; p. 129, 10½ columns; p. 148, 5½ columns, p. 171, 6 columns; p. 310, 1½ columns
- DE WILDE PRECIPITATION PROCESS.** By G. Witteveen. M & M., vol. 31, p. 342. 3½ columns.
- THE TREATMENT OF SLIMES BY CYANIDATION AND ELECTRICAL PRECIPITATION ON MERCURY** By F. T Mumford T A I. M. E., vol 9, p. 96. 10 pages. I
- CYANIDING SLIME** By M R. Lamb T A. I. M. E., vol 40, p. 775. 4½ pages. I.
- SLIME TREATMENT IN CYANIDING** T A. I. M. E., vol. 40, p 768 6 pages I
- CYANIDING SLIME** T. A I M E, vol. 40, p 775 4½ pages. I
- SETTLING SLIME IN CYANIDE TREATMENT** P. C. M & M Soc S A., vol. 9, p. 411. 1 column.
- IMPROVEMENTS IN SLIME TREATMENT** By M. Torrente P. C. M & M. Soc. S. A., vol. 5, p. 46, 6½ columns, I.; p 83, 1½ columns; p. 100, 1½ columns; p. 127, 3 columns; p 150, 4 columns; p 179, 3½ columns
- NOTES ON IMPROVEMENTS IN THE CYANIDE TREATMENT OF SANDS AND SLIMES.** By C H Pead. P. C M. & M, Soc. S A., vol 6, p. 76, 4 columns; p. 194, 2 columns; p. 223, 3 columns, p. 249, 3½ columns
- COLLOIDAL SILICIC ACID IN SLIMES** By W. A. Caldecott. P. C. M. & M. Soc. S. A., vol 7, p. 217. 1 column.
- THE TREATMENT OF ACCUMULATED SLIME, AND THE USE OF FILTER PRESSES FOR CLARIFYING SLIME SOLUTION AND BY-PRODUCTS.** By J. D O'Hara. P C M. & M Soc S A., vol. 10, p. 342, 5 columns, p 403, 2 columns, I.
- TREATMENT OF A CONCENTRATE-SLIME** By A. E. Drucker Min. & Sci Press, vol 96, p. 458. 5 columns. I.
- THE SEPARATION OF SLIME IN CYANIDE TREATMENT.** By H. G. Nichols. Min. & Sci. Press, vol 96, p 563. 7 column I.
- TREATMENT OF SLIME IN THE CYANIDE PROCESS** Min. & Sci. Press, vol. 100, p. 798 4 columns I
- SLIME TREATMENT IN CYANIDING.** Min & Sci Press, vol. 100, p. 44. 5 columns I
- A METHOD OF SETTLING SLIMES, AS APPLIED TO THEIR SEPARATION FROM SOLUTION IN CYANIDE TREATMENT** By H G Nichols. T. I M. & M, vol 17, p. 293. 38 pages I
- CYANIDE TREATMENT OF SLIME** P. C M. & M. Soc. S. A., vol. 10, p. 322. 3½ columns.
- METHOD OF TESTING SLIME.** By G. J. Young. Min. Mag, London, vol. 3, p. 133. 2½ columns I
- SLIME TREATMENT BY CYANIDATION.** E & M J, vol 88, p 688. 5½ columns.
- A PROPOSED NEW SYSTEM FOR THE CYANIDE TREATMENT OF SLIMES.** By F. McCann. E & M. J., vol. 88, p. 688. 5½ columns.
- CYANIDING SLIMES.** E. & M. J, vol. 89, p 462. 1½ columns. I.
- ALL-SLIME TREATMENT OF ORE IN CYANIDE PLANTS.** By H. A. Megraw. E. & M J., vol. 89, p. 319. 5 columns. I.
- CYANIDING SLIMES.** E. & M. J, vol. 89, p. 319. 5 columns. I
- CYANIDING SLIME: Process** By E. B Wilson. M. & M., vol. 29, p. 59. 6 columns. I.
- SLIME TREATMENT IN CYANIDING.** By E. B. Wilson. M. & M., vol. 29, p. 59. 6 columns. I.

- SLIME TREATMENT IN CYANIDING.** M. & M., vol. 29, p. 129, 9 columns, I.; p. 187, 3 columns, I., p. 224, 6 columns, I
- SLIMING ORE FOR CYANIDATION.** By M. R. Lamb Min. & Sci Press, vol. 95, p. 658 1½ columns
- SLIME SETTLING BEFORE CYANIDING.** E & M. J., vol 87, p. 837 3 columns. I.
- ALL-SLIMING.** By E M Hamilton. Min. & Sci. Press, vol 99, p 255. 5½ columns I.
- THE CHEMICAL CONTROL OF SLIMES.** By H. E. Ashley T. A I M. E., vol. 41, p. 380 16 pages. I
- SLIME TREATMENT AT VARIOUS CYANIDE PLANTS.** Min. & Sci. Press, vol 95, p. 46. 4½ columns.
- THE UTILIZATION OF WASTE HEAT IN SLIMES TREATMENT.** By A. Salkinson. P. C. M & M. Soc S A, vol 7, p 403, 6 columns, vol 8, p. 52, 1 column; p 81, 7½ columns, p 142, 6½ columns.
- FURTHER NOTES ON THE UTILIZATION OF WASTE HEAT IN SLIMES TREATMENT** By A Salkinson P C. M & M. Soc. S. A., vol 9, p. 308. 3½ columns
- PROPOSED PROCESS FOR TREATMENT OF ZINC GOLD SLIMES BEFORE SMELTING** By C. E. Meyer. P C. M. & M. Soc. S. A., vol 6, p. 361, 6 columns; p 83, 1 column; p. 139, 2 columns
- THE DORR CONTINUOUS SLIME THICKENER.** M. & M., vol. 30, p 79. 1½ columns I.
- SLIME TREATMENT AT KALGOORLIE.** By M W. von Bernewitz. Min. & Sci Press, vol 95, p 743 2 columns I.
- SLIME TREATMENT AT THE SANTA NATALIA MILL.** By C Shapeley. E. & M. J., vol. 90, p. 358. 4 columns I.
- ALL-SLIME CYANIDE PROCESS AT HACIENDA DE LA UNION.** E & M. J., vol. 86, p. 991. 2 columns.
- SLIME TREATMENT AT THE TAJO, ROSARIO MILL, MEXICO** T. A. I M E., vol. 41, p 345 11 pages. I
- SLIME TREATMENT AT THE NORTH STAR MINES, CALIFORNIA** E & M. J., vol 90, p. 410 1 column.
- FILTER PRESS TREATMENT OF SLIMES.** By H R Edmans T Au I M E., vol 11, p. 77. 19½ pages. I
- NOTES ON THE USE OF THE FILTER PRESS FOR CLARIFYING SOLUTIONS.** By S J. Truscott and A Yates. P. C. M & M Soc. S. A, vol 7, p 3, 2½ columns; p 45, 2 columns; p 83, 2 columns; p 269, ¼ column; p. 321, 2 columns.
- FILTERING SLIMES** By E Parrish. Min & Sci Press, vol 99, p. 493. 2½ columns.
- FILTER PRESS WORK.** M. & M., vol 31, p 600 1 column I.
- FILTER PRESSING SLIMES** By M W. von Bernewitz Min & Sci. Press, vol 101, p 377. 3 columns
- FILTER PRESS WORK IN CYANIDING CONCENTRATE** Min. & Sci. Press, vol 100, p 416 3 columns I
- VACUUM FILTRATION** By A. Nichols. Min & Sci Press, vol 100, p. 395. 2 columns. I.
- FILTER PRESSING.** P. C M. & M. Soc S A, vol. 10, p. 222. ¼ column.
- THE FILTER PRESS IN CYANIDING** By E B Wilson M. & M, vol 29, p 129, 9 columns, I; p 187, 3 columns, I., p 224, 6 columns, I
- FILTERING SLIMES IN CYANIDING.** Min & Sci. Press, vol 95, p. 715. 3 columns. I
- FILTERING GOLD SLIME.** By E. Jensen E. & M. J, vol. 87, p. 902. 2 columns. I.
- CONTINUOUS VACUUM-FILTER MACHINE** By B Hunt. Min & Sci. Press, vol. 97, p. 430. 3 columns. I.
- CONTINUOUS SLIME FILTER** By R. Schorr Min & Sci Press, vol. 97, p. 194. 4 columns. I.

- OLIVER CONTINUOUS FILTER** By A. H. Martin Min. & Sci. Press, vol. 99, p. 715. 2 columns I.
- USE OF THE OLIVER CONTINUOUS FILTER AT THE NORTH STAR MINES, CALIFORNIA.** E. & M. J., vol. 90, p. 411. 1 column I.
- THE OLIVER FILTER PRESS AT GRASS VALLEY** E. & M. J., vol. 87, p. 440.  $\frac{1}{2}$  column I.
- THE OLIVER CONTINUOUS FILTER AT MINAS DEL TAJO** By G. A. Tweedy and R. L. Beals. E. & M. J., vol. 89, p. 506 5 columns. I.
- THE BURT RAPID CYANIDE FILTER.** By E. Burt. Min. & Sci. Press, vol. 95, p. 717.  $3\frac{1}{2}$  columns. I.
- THE BUTTERS' SLIME-FILTER AT THE CYANIDE PLANT OF THE COMBINATION MINES COMPANY, GOLDFIELD, NEVADA** By M. R. Lamb T. A. I. M. E., vol. 38, p. 200. 10 pages. I.
- THE BUTTERS' FILTER USED AT THE MONTEZUMA MILL, COSTA RICA** E. & M. J., vol. 90, p. 716  $\frac{1}{2}$  column.
- THE SWEETLAND FILTER PRESS** By E. J. Sweetland E. & M. J., vol. 85, p. 359 3 columns I.
- THE HUNT CONTINUOUS SLIME FILTER** P. C. M. & M. Soc. S. A., vol. 10, p. 295.  $1\frac{1}{2}$  columns
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- PRESSURE FILTRATION.** By E. J. Sweetland Min. & Sci. Press, vol. 99, p. 853  $4\frac{1}{2}$  columns I.
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- VACUUM SLIME-FILTERS.** Min. & Sci. Press, vol. 95, p. 46  $4\frac{1}{2}$  columns
- IMPROVEMENTS IN THE TREATMENT OF SLIME BY THE VACUUM-FILTER PROCESS** By A. W. Allen. E. & M. J., vol. 87, p. 1004. 3 columns. I.
- VACUUM-FILTER TREATMENT OF SLIMES.** E. & M. J., vol. 87, p. 1004 3 columns. I.
- VACUUM-FILTERING OF SLIME AT WAIHI, NEW ZEALAND** P. C. M. & M. Soc. S. A., vol. 8, p. 13. 2 columns
- FILTRATION OF SLIMES AT EL ORO, MEXICO.** By D. L. H. Forbes. E. & M. J., vol. 86, p. 458.  $3\frac{1}{2}$  columns. I.
- FILTER PRESSES AT THE TAJO, ROSARIO MILL, MEXICO** T. A. I. M. E., vol. 41, p. 349. 12 pages
- FILTER PRESS PRACTICE IN THE HOME-STAKE MILLS.** Min. & Sci. Press, vol. 95, p. 21  $4\frac{1}{2}$  columns. I.
- SLIME TREATMENT AT THE EL ORO MILL, MEXICO.** E. & M. J., vol. 87, pp. 688 and 689 4 columns.
- See also SLIMES AND THEIR TREATMENT
- SOME SUGGESTIONS ON THE CYANIDING OF TAILINGS** By A. Prister. P. C. M. & M. Soc. S. A., vol. 5, p. 338,  $6\frac{1}{2}$  columns; vol. 6, p. 113,  $1\frac{1}{2}$  columns, p. 190,  $\frac{1}{2}$  column.
- A PROPOSED METHOD OF TREATING SAND RESIDUE DUMPS.** By S. J. Truscott and A. Yates. P. C. M. & M. Soc. S. A., vol. 6, p. 213.  $3\frac{1}{2}$  columns, vol. 7, p. 293, 3 columns.
- THE CYANIDING OF REFRACTORY TAILINGS ON THE WITWATERSRAND.** By W. H. C. Lovely T. A. I. M. E., vol. 11, p. 104. 9 pages.
- RE-TREATMENT OF TAILING AT OROYA-BROWNHILL.** Min. Mag. London, vol. 4, p. 460  $1\frac{1}{2}$  columns. I. Flowsheet
- See also SAND TREATMENT.

- CYANIDATION OF SILVER ORES. By W. J. Sharwood. Min. & Sci. Press, vol. 97, p. 418. 5 columns.
- CYANIDATION OF MANGANESE SILVER ORES. By E. M. Hamilton. Min. & Sci. Press, vol. 99, p. 756 2½ columns.
- CYANIDATION OF SILVER ORES. By F P Holt. Min. & Sci. Press, vol. 98, p. 546. 4 columns Tables.
- CYANIDATION OF SILVER ORES By T. P. Holt Min. & Sci. Press, vol. 99, p. 159 6½ columns. D
- CYANIDATION OF SILVER ORES. By D Mosher. Min & Sci Press, vol. 98, p. 691. 5½ columns. I.
- CYANIDATION OF SILVER ORES. By L. B. Kniffin. Min & Sci. Press, vol. 100, p. 322 1½ columns.
- TREATMENT OF THE MOUNT REID AURIFEROUS ORES WITH THE HELP OF CYANIDE OF POTASSIUM By L. Williams. T. Au. I. M E, vol 4, p. 45. 5 pages.
- EXPERIMENTS ON THE ASSAY OF ACID WASHES RESULTING FROM THE CYANIDE "CLEAN-UP" BY THE USE OF BISULPHATE. By L. J. Wilmoth. P. C. M & M Soc. S. A., vol. 10, p. 136. 5½ columns.
- THE USE OF THE BISULPHATE OF SODIUM IN THE CLEAN-UP. By J. E. Thomas and G. W. Williams. P. C. M & M. Soc. S A, vol 5, p. 334, 7 columns, vol. 6, p. 82, 4 columns; p. 113, ½ columns, p. 156, 3 columns.
- CYANIDE WORKS' CLEAN-UP PRACTICE. By J. E. Thomas. P. C M. & M, Soc. S. A, vol 7, p. 109, 3 columns; p. 181, 2½ columns, p. 211, 5 columns; p. 268, 1½ columns.
- NOTES ON LIME, CLEAN-UP, ETC. By G W. Williams. P. C. M. & M., Soc S. A, vol. 5, p. 251, 7½ columns; p. 314, 2 columns; vol. 6, p. 19, 4 columns, p. 51, 3 columns; p. 78, 5 columns
- SOME FURTHER IMPROVEMENTS IN APPLIANCES FOR THE CYANIDE CLEAN-UP. By D V Burnett P. C. M. & M. Soc. S A, vol. 5, p. 145, 5 columns, I.; p. 211, 1½ columns; p. 235, 2½ columns; p. 255, 1½ columns.
- CYANIDATION AT THE ALASKA-TREADWELL MINES By T. A. Rickard. Min Mag., London, vol. 3, p. 280. 2 columns
- CYANIDING CRIPPLE CREEK DUMPS. M & M., vol 29, p. 444 ½ column.
- CYANIDATION OF CRIPPLE CREEK ORES By P. Argall. Min & Sci. Press, vol 101, p. 804 3½ columns.
- CYANIDING AT THE MONTEZUMA MILL, COSTA RICA E. & M. J, vol 90, p. 716. 3 columns.
- CYANIDING AT THE NORTH STAR MINES, GRASS VALLEY. E. & M. J., vol 87, p. 440. 3 columns. I.
- CYANIDING AT THE NORTH STAR MINES IN CALIFORNIA. By J. Tyssowski. E. & M J, vol 90, p. 409. 8½ columns I
- CYANIDE PRACTICE AT THE HOMESTAKE MILLS. By F L Bosqui. Min & Sci Press, vol. 95, p. 21 4½ columns. I
- CYANIDING BLACK HILLS "BLUE ORES" By B. D O'Brien. M. & M, vol 29, p. 427. 9 columns.
- CYANIDING SILVER ORES IN HONDURAS By G. E Driscoll Min. & Sci. Press, vol. 98, p. 388 4½ columns I.
- RECENT CYANIDE PRACTICE IN KOREA. By A. E. Drucker. Min. & Sci. Press, vol. 97, p. 458. 6 columns
- CYANIDING AT MINAS DEL TAJO, SINALOA. E. & M. J., vol. 89. 7 columns. I.
- CYANIDE PRACTICE AT MINAS DEL TAJO, SINALOA, MEXICO. By G. A. Tweedy and R L Beals. E & M. J., vol 89, p. 566. 12 columns. I.
- CYANIDE PRACTICE AT EL TAJO MILL, JALISCO, MEXICO. E. & M. J., vol. 89, p. 274. 1½ columns. I.

- THE CYANIDE PRACTICE AT THE EL ORO MILL, MEXICO. E. & M. J., vol 87, p 683. 23 columns. I.
- CYANIDING AT TAJO, ROSARIO, MEXICO. T. A. I. M. E., vol 41, p. 339 30 pages. I
- NOTES ON THE CYANIDATION OF SILVER-GOLD ORES AT GUANAJUATO, MEXICO. By J. A. Reid J. M. Soc. N. S., vol 14, p. 37 12½ pages.
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- PRESENT CYANIDE PRACTICE IN MEXICO By M. R. Lamb. E. & M. J., vol 85, p. 703 20 columns. I
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- SILVER CYANIDING IN MEXICO E. & M. J., vol 86, p. 846. ¾ column
- SILVER CYANIDING IN MEXICO By J. B. Empson. E. & M. J., vol 86, p. 667 3½ columns
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- CYANIDE TREATMENT AT THE JESUS MARIA AND FLORES MILLS E. & M. J., vol 86, p. 616. 10 columns.
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- SILVER CYANIDING AT THE SAN RAFAEL MILL, PACHUCA. By E. Girault. E. & M. J., vol. 90, p. 67. 6½ columns. I.
- CYANIDING ORES IN MEXICO By E. Girault. M. & M., vol. 30, p. 618. 5 columns. I.
- CYANIDATION OF SILVER ORE IN MEXICO. By W. A. Caldecott. Min. & Sci. Press, vol. 97, p. 294 5 columns.
- CYANIDATION IN MEXICO By F. J. Hobson Min. & Sci. Press, vol. 97, p. 159, 4 columns; p. 182, 6 columns, I.
- MILLING AND CYANIDE PRACTICE, SAN PROSPERO MILL, GUANAJUATO Min. & Sci. Press, vol. 97, p. 130. 5 columns
- CYANIDATION OF SILVER ORE IN MEXICO By W. A. Caldecott. Min. & Sci. Press, vol. 96, p. 426, 4½ columns, p. 594, 4 columns, I
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- CYANIDING AT THE DESERT MILL, MILLERS, NEVADA Min. & Sci. Press, vol. 95, p. 494 8½ columns I.
- CYANIDATION AT THE GOLDFIELD MILL. E. & M. J., vol 86, p. 471. 6 columns. I.
- CYANIDING AT GOLDFIELD, NEVADA, Min. & Sci. Press, vol. 96, p. 843 1 column
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### Cyaniding Plants

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A SKETCH OF THE SMALL CYANIDE PLANT AS ERRECTED AND WORKED IN RHODESIA By F J. Thomas. P C M. & M Soc. S A, vol 10, p. 82, 7 columns; p. 207, 2½ columns

SLIME PLANT OF THE SIMMER DEEP AND JUPITER REDUCTION WORKS. Min & Sci Press, vol. 99, p. 398 1½ columns.

CYANIDE MILLS, GUANAJUATO DEVELOPMENT COMPANY. By C. T Rice E. & M J, vol. 86, p. 947, 11½ columns, I; p 997, 15 columns, I.

VETA COLORADO CYANIDE MILL, PARRAL, MEXICO By C T Rice E & M J., vol. 86, p 120 8 columns.

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DESCRIPTION OF A CHEAP CYANIDE PLANT ERRECTED IN WESTERN AUSTRALIA By E M Weston P C. M & M Soc S. A, vol 5, p. 23. 2½ columns.

REGENERATING COPPER CYANIDE SOLUTION By R. P Wheelock Min. & Sci. Press, vol. 100, p. 397. 3 columns

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### Chlorination Processes

CHLORINATION IN CALIFORNIA. By W E Darrow. Min & Sci. Press, vol. 97, p. 609. 3½ columns.



**REFINING GOLD BY CHLORINE GAS.** Min. & Sci. Press, vol 22, p 278, 1½ columns; p 297, 1½ columns

**THE MALM DRY CHLORINATION PROCESS** By R L Herrick M. & M, vol. 30, p 370. 9 columns. I.

**MALM PROCESS IN COLORADO A Dry Chlorination Process** By F. Rickard. Min & Sci Press, vol. 99, p 662. 2½ columns

**DRY CHLORINATION OF SULPHIDE ORES** By F. W. Traphagen. Min. & Sci Press, vol. 98, p. 522. 2 columns. Table.

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**CHLORINATION OF GOLD ORES; LABORATORY TESTS: Discussion of the paper by A. L Sweetser, Trans.,** vol 38, p. 236 T A. I. M. E., vol. 39, p 793. 2½ pages.

See also **COST OF METALLURGICAL TREATMENT**

### Refining Gold and Silver

**FLUXING OF GOLD SLIMES** By C E. Mayer P. C M. & M Soc. S A, vol 5, p. 168, 4 columns, p. 211, 1½ columns, p 341, ½ column, vol. 6, p. 17, 1 column.

**TREATMENT OF THE GOLD AND SILVER PRECIPITATE AT DOS ESTRELLAS** By W. Neal. Min & Sci Press, vol 98, p. 327. 2 columns.

**SMELTING GOLD PRECIPITATES AND BULLION WITH OIL FUEL** By A. Yates. E. & M. J, vol. 88, p. 473. 3½ columns.

**ELECTROLYTIC REFINING OF BULLION IN THE UNITED STATES MINTS.** By H. J Slaker. E. & M. J., vol. 90, p. 214. 2 columns.

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**THE CLEAN-UP, MELTING AND REFINING OF GOLD BULLION.** By G W Williams. Min. & Sci. Press, vol 95, p. 277. 5 columns

**REFINING OF SILVER BULLION CONTAINING ARSENIC AND ANTIMONY.** By B. Neilly. J. C. M I, vol 11, p 586. 6 pages I.

**BATTERY AND CYANIDE GOLD SMELTING** By A. Thomas P. C M & M Soc S A, vol. 9, p 6, 6 columns; p 50, 2 columns; p. 120, 5 columns; p 162, 5½ columns; p 191, 4 columns

**RESULTS OF BAG-HOUSE EXPERIMENTS IN CONNECTION WITH TAVENER'S PROCESS.** By H. Rusden P C M & M. Soc S. A, vol 5, p 288 2 columns. I.

**THE TAVENER PROCESS** By K. L Graham. P C M & M. Soc S A, vol 5, p. 315. 2 columns.

See also **COST OF METALLURGICAL TREATMENT.**

### Metallurgy of Iron and Steel

**ABOUT SOME OF THE PROPERTIES OF STEEL** By A E Hunt P. E. Soc W Pa, vol 2, p 271, 8 columns, p 251, 6 pages

**THE SOLID NON-METALLIC IMPURITIES IN STEEL (SONIMS).** By H. D. Hibbard. T A. I. M E., vol. 41, p. 803. 20 pages.

**ON THE CHEMICAL CHANGES WHICH PIG IRON UNDERGOES DURING ITS CONVERSION INTO WROUGHT IRON.** By F. C. Calvert. Min Mag., vol 9, p 487 6 pages.

**THE DETERIORATING EFFECT OF "ACID PICKLE" ON STEEL RODS, AND THEIR PARTIAL RESTORATION ON "BAKING."** P. C. M & M Soc. S A., vol. 7, p. 424. 2½ columns.

**NOTE ON SOME CAUSES OF RED-SHORTNESS AND COLD-SHORTNESS IN IRON.** By W Metcalf. P E. Soc. W Pa, vol. 2, p 217. 2 columns; p. 219, 2 columns.

- CRYSTALLIZATION OF IRON AND STEEL.** By A. M. Johnston. P. C. M. & M. Soc. S. A., vol. 10, p. 3. 15 columns.
- ON THE COMPOUNDS OF CARBON AND IRON, AND THEIR INFLUENCE ON THE PRODUCTION OF PIG IRON** By A. Gurlt. Min. Mag., vol. 8, p. 40, 7 pages; p. 123, 6 pages.
- CARBON AND THE PROPERTIES OF CAST IRON** By H. M. Howe. E. & M. J., vol. 86, p. 943. 12 columns.
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- STEEL CASTINGS.** P. E. Soc. W. Pa., vol. 25, p. 333. 21 pages. I.
- EXTRACTION OF IRON FROM ORE AND PULP.** By W. C. Brown. E. & M. J., vol. 90, p. 445. 1 column. I.
- SEPARATION OF SILICA AND ALUMINA IN IRON ORES.** E. & M. J., vol. 86, p. 168. 1 column.
- INFLUENCE OF TOP-LAG ON THE DEPTHS OF THE PIPE IN STEEL INGOTS.** By H. M. Howe. T. A. I. M. E., vol. 40, p. 804. 2½ pages.
- SEGREGATION IN STEEL INGOTS.** By H. M. Howe. Sch. Mines Quart., vol. 29, p. 238. 3 pages.
- THE INFLUENCE OF INGOT-SIZE ON THE DEGREE OF SEGREGATION IN STEEL INGOTS.** By H. M. Howe. T. A. I. M. E., vol. 40, p. 644. 4 pages. I.
- PIPING AND SEGREGATION IN STEEL INGOTS: Discussion of H. M. Howe's Paper.** T. A. I. M. E., vol. 38, p. 924. 11 pages. I.
- THE INFLUENCE OF THE CONDITIONS OF CASTING ON PIPING AND SEGREGATION, AS SHOWN BY MEANS OF WAX INGOTS.** By H. M. Howe and B. Stoughton. T. A. I. M. E., vol. 38, p. 109. 17 pages. I.
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- BLOW-HOLES IN STEEL INGOTS.** By E. Von Mallitz. T. A. I. M. E., vol. 38, p. 412. 34 pages.
- STEEL HARDENING METALS.** By J. H. Pratt. U. S. G. S., Mineral Resources, 1903, Mineral Resources, 1904, 58 pages.
- COPPER-CLAD STEEL.** By W. Tassin. E. & M. J., vol. 88, p. 813. 3½ columns.
- CUPRO-NICKEL STEEL.** By G. H. Clamer. E. & M. J., vol. 90, p. 215. 2 columns.
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- THE USE OF FERRO-ALLOYS.** E. & M. J., vol. 85, p. 363. ½ column.

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- THE RELATION OF SLOW DRIVING TO FUEL-ECONOMY IN IRON BLAST FURNACE PRACTICE.** By J. B. Miles. T. A. I. M. E., vol. 39, p. 540. 4½ pages.
- THE WORK OF THE TESTING DEPARTMENT OF THE WATERTOWN ARSENAL, IN ITS RELATION TO THE METALLURGY OF STEEL.** By J. E. Howard. T. A. I. M. E., vol. 39, p. 223. 5½ pages.
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- THE UNIFORM NOMENCLATURE OF IRON AND STEEL:** Discussion of the Report of Committee 24 of the International Association for Testing Material, presented at the Brussels Congress, 1906, and republished in Bi-monthly Bulletin, No 20, March, 1908, pp. 227-237, but not included in this volume. T. A. I. M. E., vol. 39, p. 924. 6 pages.
- THE AIR-FURNACE PROCESS OF PREPARING WHITE CAST IRON FOR THE MALLEABILIZING PROCESS.** By H. M. Howe and Enrique Gouceda. T. A. I. M. E. vol. 39, p. 765. 9½ pages. D.
- OXYGEN PROCESS FOR MELTING OF IRON** By A. Gradenwitz M. & M., vol. 31, p. 146. 4 columns I.
- A NEW MARTIN FURNACE WITH DOUBLE HEARTH.** E. & M. J., vol. 88, p. 728. 3½ columns. I.
- ORE HANDLING BRIDGE AT DUQUESNE STEEL WORKS** E. & M. J., vol. 87, p. 944. 2 columns. I.
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- ROASTING AND SMELTING PLANT AT LONDONDERRY IRON WORKS.** By R. G. Leckie. J. M. Soc. N S., vol. 1, p. 50, pt. 3. 2½ pages.
- NATIVE IRON SMELTING IN HAUTE GUINÉE (WEST AFRICA).** By J. M. Campbell. T. I. M. & M., vol. 19, p. 458. 5 pages. I.
- IRON AND STEEL WORKS AT HANYANG, HUPE, CHINA.** By A. J. Seltzer. E & M J., vol. 89, p. 1231. 10 columns. I.
- THE UNITED STATES STEEL CORPORATION.** By F. Hobart. E & M J., vol. 87, p. 659. 7½ columns.
- INTRODUCTION OF THE THOMAS BASIC STEEL PROCESS IN THE UNITED STATES.** By G. W. Maynard. T. A. I. M. E., vol. 41, p. 280, 16 pages; p. 903, 1 page.
- THE COLOUSEUS PROCESS FOR MAKING SLAG CEMENT.** By F. A. Talbot. E & M. J., vol. 90, p. 608 4½ columns. I.
- ON THE PROGRESS AND PRESENT CONDITION OF THE MANUFACTURE OF IRON IN THE UNITED STATES.** By E. F. Pletschke. Min. Mag., vol. 10, p. 223. 6 pages.
- ON THE MANUFACTURE OF STEEL** Min. Mag., vol. 5, p. 296 10½ pages.
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- TWENTY YEARS' PROGRESS IN IRON AND STEEL MANUFACTURE IN UNITED STATES.** By J. M. Swank. U S G S, Mineral Resources, 1891 37 pages.
- MANUFACTURE OF IRON AND STEEL; AND IRON ORES OF THE UNITED STATES.** By J M Swank U.S. G S, Mineral Resources 1883-1884, vol 14.
- PIG IRON PRODUCTION FOR 100 YEARS.** E & M. J, vol. 90, p. 1263.  $\frac{1}{2}$  column.
- SOUTHERN RESOURCES FOR MANUFACTURE OF IRON AND STEEL** By J. Birkinbine. U S G. S, Mineral Resources, 1886, vol. 8. 4 pages.
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- MANUFACTURE OF IRON BLOOMS.** By J. T. Hodge. Min. Mag., vol. 2, p. 244. 5 pages I.
- IRON AND STEEL FROM BLACK SANDS.** P. C. M. & M Soc S. A., vol. 7, p. 418.  $3\frac{1}{2}$  columns.
- THE IRON MANUFACTURE OF GREAT BRITAIN: Theoretically and Practically Considered.** By W. Truran. Min. Mag., vol. 8, p. 105, 16 pages; p 203, 17 pages; p. 301, 20 pages; p 399,  $16\frac{1}{2}$  pages; p. 495, 12 pages; vol 7, p. 38, 20 pages; p. 125, 25 pages; p. 234, 11 pages, p 334,  $10\frac{1}{2}$  pages; p 425, 20 pages
- BASIC OPEN-HEARTH STEEL MANUFACTURE, AS CARRIED OUT BY THE DOMINION IRON AND STEEL COMPANY AT SIDNEY, CAPE BRETON, NOVA SCOTIA** By F. E Lathe J. C M I., vol. 10, p 373 24 pages I.
- THE IRON AND STEEL INDUSTRY OF THE PROVINCE OF ONTARIO, CANADA** By J G Barnelee J. C M I, vol 11, p. 125 25 pages I
- EARLY IRON MAKING IN BRAZIL** By O A. Derby E. & M J., vol 88, p. 1112 2 columns.
- IRON MAKING IN AUSTRALIA** By A Selwyn-Brown E & M. J, vol 85, p. 601.  $2\frac{1}{2}$  columns
- STEEL MAKING IN CHINA.** By T T Read Min. Mag, London, vol. 2, p. 199 11 columns I.
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- TOOL STEEL MAKING IN STYRIA.** By R F Bohler Sch Mines Quart., vol 29, p. 329 •  $12\frac{1}{2}$  columns I.
- See also **THE IRON TRADE, and ELECTRO-METALLURGY, also COST OF METALLURGICAL TREATMENT.**
- Iron Blast Furnace Method, Etc.**
- THE DESSICATION OF FURNACE AIR.** M. & M., vol 31, p. 723.  $6\frac{1}{2}$  columns I.
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- EXPERIENCE WITH THE GAYLEY DRY BLAST AT THE WARWICK FURNACES, POTTSTOWN, PENNSYLVANIA.** Discussion of the Paper of E. B. Cook, p. 705 T. A. I. M. E., vol. 39, p 922. 2 pages.
- NOTES ON THE GAYLEY DRY-AIR BLAST-PROCESS.** Discussion of C A Meissner's Paper. T. A. I. M. E., vol 38, p 901. 11 pages. D.
- ZINC OXIDE IN IRON-ORES, AND THE EFFECT OF ZINC IN THE IRON BLAST FURNACE** By J J. Porter T. A. I. M. E., vol 38, p 448. 7 pages.
- THE USES OF CHEMICAL ANALYSIS IN IRON BLAST FURNACE PRACTICE AND SOME NOTES ON LABORATORY METHODS.** By G D Drummond J C M. I., vol 10, p. 442 20 pages.
- A HOT-BLAST FURNACE FOR THE SMALL OPERATOR** By P A Babb E & M J, vol 88, p 647. 9½ columns I.
- THE SHAPE OF THE IRON BLAST FURNACE** By H M. Howe E. & M. J., vol. 86, p 507. 13½ columns. I.
- BLAST PRESSURE AT THE TUYERES AND INSIDE THE FURNACE.** By R. H. Sweeter T A I M. E., vol. 40, p. 247. 6 pages. I
- AN UNUSUAL BLAST FURNACE PRODUCT, AND NICKEL IN SOME VIRGINIA IRON ORES.** By F Firmstone. T. A. I. M. E., vol. 39, p. 547. 2 pages; Discussion of the paper of F Firmstone, p 921. 1 page.
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- TRIAL RUNS WITH THE GARRETSON FURNACE** By C. C Semple E. & M J, vol 88, p 1266. 6 columns
- THE COMBUSTION-TEMPERATURE OF CARBON AND ITS RELATION TO BLAST FURNACE OPERATION** By C. P. Linville T. A. I. M. E., vol. 41, p 269. 11½ pages. D
- DEVELOPMENT IN THE SIZE AND SHAPE OF BLAST FURNACES IN THE LEHIGH VALLEY, AS SHOWN BY THE FURNACES AT THE GLENDON IRON WORKS** By F. Firmstone T. A. I. M. E., vol. 40, p 459. 16 pages. I.
- BLAST FURNACE PRACTICE: DISCUSSION** of T F Witherbee Paper T. A. I. M. E., vol 38, p. 887. 13 pages
- IRON MANUFACTURE: Economy in Its Production, Improved Form of Blast Furnace** Min Mag., vol 10, p 415. 6 pages. I.
- PREPARATION OF MATERIALS FOR THE BLAST FURNACE** By D Baker E. & M. J., vol. 85, p. 609 5½ columns
- THE DISTRIBUTION OF IRON BLAST FURNACES IN THE UNITED STATES.** E & M. J., vol 90, p. 160. Table and Map.
- See also **THE IRON TRADE.**
- Electro-Metallurgy of Iron and Steel**
- TOOL STEEL DIRECT FROM THE ORE IN AN ELECTRIC FURNACE** By A. Stansfield. J C. M. I., vol 13, p 151. 11½ pages. I.
- POSSIBILITIES IN THE ELECTRIC SMELTING OF IRON ORES.** By A. Stansfield. J. C M I., vol. 11, p. 180. 8 pages
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- PROGRESS IN ELECTRO-SIDERURGY.** By P McN Bennie. J. C. M I., vol. 13, p. 135. 16 pages. I.

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- ELECTRICAL REDUCTION OF IRON.** By J. W. Richards. Min. & Sci. Press, vol. 100, p. 549. 8 columns. I.
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- REMARKS ON THE PROCESS FOR SMELTING LEAD.** By A. Trippel. Min. Mag., vol. 4, p. 36. 12 pages.
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- LEAD AND COPPER SLAGS** By J. A. Bait. Min. & Sci. Press, vol. 101, p. 602. 6½ columns.
- THE ROBINSON NON-SLAGGING TUYERE** E. & M. J., vol. 85, p. 251. 1 column. I
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- THE BAG HOUSE AT SELBY, CALIFORNIA** By J. C. Bennett. E. & M. J., vol. 86, p. 451 16½ columns. I.
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**A FEW NOTES ON THE REFINING OF BASE BULLION.** By C W Lee and W. O Brunton P. C M. & M. Soc. S A, vol. 7, p. 358, 5 columns, I.; vol. 8, p. 52, 1 column; p. 80,  $\frac{1}{2}$  column; p. 121,  $\frac{1}{2}$  column.

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**A FEW NOTES ON THE CUPPELLING GOLD-LEAD BULLION.** By Geo. Melvill P C. M & M Soc S A., vol 9, p 157,  $3\frac{1}{2}$  columns; p. 345,  $\frac{1}{2}$  column

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**LEAD SMELTING IN QUEENSLAND, AUSTRALIA** E & M. J, vol 87, p. 604. 2 columns.

**TRAIL SMELTER AND LEAD REFINERY.** By J. M. Turnbull M & M, vol. 31, p. 121. 10 columns I

**METALLURGICAL TREATMENT OF JAMESONITE ORES, BLACK HILLS, SOUTH DAKOTA** By G P Ives and I. D. Ossa. E & M J, vol 87, p. 891. 3 columns

**SMELTING REFRACTORY LEAD ORES AT LAURIUM.** By L. Guillaume. E & M. J., vol. 88, p. 446  $7\frac{1}{2}$  columns. I.

**LEAD AND ZINC SMELTING IN UPPER SILESIA** By O. H. Hahn E. & M. J., vol. 89, p. 1111.  $9\frac{1}{2}$  columns. I.

**SMELTING THE LEAD ORE OF THE COEUR D'ALENE REGION** Min. & Sci. Press, vol 96, p. 627 14 columns. I.

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**WEBB CITY LEAD SMELTERY.** By L. L. Wittich. M & M., vol. 31, p. 709.  $3\frac{1}{2}$  columns. I.

**A PERUVIAN LEAD SMELTER.** By L W Strauss. Min. & Sci. Press, vol. 97, p 361.  $4\frac{1}{2}$  columns. I.

**MIDVALE BLAST FURNACE PRACTICE, UTAH.** By L. A Palmer. M. & M., vol. 30, p. 543 4 columns I.

See also **METALLURGY OF GOLD AND SILVER, and METALLURGY OF COPPER, also COST OF METALLURGICAL TREATMENT.**

## **Metallurgy of Nickel and Cobalt**

**MINING AND SMELTING PLANT OF MOND NICKEL COMPANY.** By G B. Shipley. E. & M J., vol 90, p. 364.  $8\frac{1}{2}$  columns I

**ELECTRODE POSITION OF NICKEL,** By E F. Kern and F G. Fabian. Sch. Mines Quart., vol. 29, p. 342. 28 pages.

## **Metallurgy of Quicksilver**

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### Miscellaneous Information

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- EXPLOSIVE MINE GASES AND DUSTS.** By R. T. Chamberlin. U. S. G. S., Bull. 383. 67 pages. 1909.
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**MINING LAWS OF BAHIA, BRAZIL.** E. & M. J., vol. 87, p. 1032. ½ column.

**CANADIAN INDUSTRIAL DISPUTES ACT.** By F. A. Rose. Min. & Sci. Press, vol. 96, p. 104. 2 columns.

**QUEBEC MINING LAW.** E. & M. J., vol. 87, p. 1046. 1 column.

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**DEFICIENCIES IN CANADIAN MINING LAWS: A Plea for Improvement and Unification.** By H. Mortimer-Lamb. J. C. M. I., vol. 13, p. 478. 11 pages.

**MINING REGULATIONS IN CHINA.** Min. & Sci. Press, vol. 96, p. 298. 1½ columns.

**PROPRIETORSHIP, MINING REGULATIONS AND CUSTOMS IN THE YUNNAN TIN DISTRICT, CHINA.** T. I. M. & M., vol. 19, p. 189. 1 page.

**ANCIENT MINING CUSTOMS IN THE PEAK DISTRICT OF DERBYSHIRE.** By H. L. Terry. E. & M. J., vol. 88, p. 256. 2 columns.

**THE NEW ILLINOIS MINING LAW.** M. & M., vol. 31, p. 761. 4½ columns.

**MINING LICENCES IN INDIA.** Min. & Sci. Press, vol. 95, p. 500. ½ column.

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**THE PROPOSED NEW MINING LAW OF MEXICO.** By R. E. Chism. E. & M. J., vol. 88, p. 216. 9 columns.

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**THE MINING MAN'S INTEREST IN LAND CLASSIFICATION.** By G. O. Smith. Min. & Sci. Press, vol. 99, p. 501. 4 columns.

**THE LAW OF MINES AND REAL ESTATE.** Min. Mag., vol. 2, p. 166. 2½ pages.

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**TIDE LANDS.** E. & M. J., vol. 87, p. 639.  $\frac{1}{2}$  column.

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**CALIFORNIA OIL AND ASPHALT LANDS.** E. & M. J., vol. 87, p. 1233.  $1\frac{1}{2}$  columns.

**THE PHOSPHATE LAND QUESTION.** E. & M. J., vol. 87, p. 505.  $2\frac{1}{2}$  columns

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**A BROAD APEX.** Min. & Sci. Press, vol. 95, p. 586.  $8\frac{1}{2}$  columns I.

**EXTRA-LATERAL RIGHTS AGAIN.** By H. V. Winchell. Min. & Sci. Press, vol. 100, p. 648. 2 columns. D.

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**MINING CLAIMS ON FOREST RESERVES.** Min. & Sci. Press, vol. 97, p. 3, 2 columns; p. 165, 2 columns.

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THE PROSPECTOR AND HIS FRIENDS. Min & Sci. Press, vol 95, p. 680. 2 columns. I.

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SINKING TEST PITS. E & M. J., vol. 88, p 328  $\frac{1}{2}$  column.

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PROSPECTING FOR GOLD. M. & M, vol 30, p. 277. 1 $\frac{1}{2}$  columns.

PROSPECTING IN CHIHUAHUA, MEXICO By R. H. Burrows. Min. & Sci. Press, vol. 100, p. 392. 4 columns I.

A SCIENTIFIC SEARCH FOR A NEW GOLDFIELD By R. T. Hill. E & M. J., vol. 86, p. 1157. 9 columns. I

PROSPECTING FOR ORES OF THE GOLDFIELD TYPE By J V Lewis E & M J., vol. 87, p. 1121 2 $\frac{1}{2}$  columns.

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PROSPECTING AND MINING GOLD PLACERS IN ALASKA. By J. P. Hutchins U. S G S., Bull 345, p. 54 24 pages 1907.

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PROSPECTING FOR COAL. By B. Halberstadt. M. & M, vol 30, p 454. 4 $\frac{1}{2}$  columns. I

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SYSTEMATIC EXPLORATION IN THE PITTSBURG COAL-SEAM. By F. Z. Schellenberg T A I M. E, vol 41, p. 225 12 pages I

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**PROSPECTING IN SIBERIA.** Min & Sci Press, vol. 20, p. 354. 1 column.

**PROSPECTING IN THE NORTH.** By H. V. Winchell. Min. Mag., London, vol. 3, p. 436. 4½ columns.

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**USE OF THE DIVINING ROD** Min & Sci. Press, vol. 95, p. 500. ½ column.

**THE DIVINING ROD.** Min & Sci Press, vol. 101, p. 711. ½ column

**DIVINING RODS** By E. S. Giles Min & Sci. Press, vol. 97, p. 151 ¾ column

**THE DIVINING ROD: A Scientific Test.** E. & M. J., vol. 85, p. 1158. 1½ columns.

**THE DIVINING ROD.** By R. W. Raymond. U. S. G. S., Mineral Resources, 1882, vol. 17. 17 pages.

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**MINING DISCOVERY: The Divining Rod.** Min. Mag., vol. 10, p. 51. 3 pages.

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**THE PROFESSIONAL EXAMINATION OF UNDEVELOPED MINERAL PROPERTIES.** By C. Catlett. T. A. I. M. E., vol. 39, p. 774. 8½ pages.

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**GRAPHIC METHODS FOR MINE VALUATION.** By H. C. Jenkins. Min. Mag., London, vol. 2, p. 287. 6 columns. I

**THE COMPUTATION OF THE PRESENT VALUE OF DEVELOPED AND UNDEVELOPED MINES.** By W. H. Goodchild. T. I. M. & M., vol. 18, p. 367. 46 pages. D.

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**COMPUTING TONNAGE FROM VOLUME OF ORE REMOVED.** By S. L. Lefevre and G. C. Stoltz. E. & M. J., vol. 87, p. 350. 1¼ columns. I.

**THE VALUATION OF PUBLIC LANDS: The Value of Coal Land.** By G. H. Ashley. U. S. G. S., Bull. 424. 75 pages. 1910.

**DEPTH AND MINIMUM THICKNESS OF BEDS (COAL) AS LIMITING FACTORS IN VALUATION.** By C. A. Fisher. U. S. G. S., Bull. 424. 75 pages. 1910.

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**LONGWALL IN INCLINED SEAMS.** By J. G. MacKenzie. M. & M., vol. 29, p. 491. 3½ columns. I.

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**PILLAR DRAWING IN THE CONNELLSVILLE REGION** T A I. M E., vol. 41, p. 229. 10 pages. I.

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- DIFFERENT METHODS OF ALLUVIAL MINING IN VICTORIA. By S. Hunter. T Au. I M. E., vol. 8, pt. 2, p. 188. 2 pages.
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- METHODS OF WORKING ALLUVIAL DEPOSITS OF VICTORIA. T. I. M. & M., vol. 17, p. 224. 4 pages. I.

- HYDRAULIC MINING AS APPLIED TO WESTERN AUSTRALIA.** By R. N. Wells. T. Au. I. M. E., vol. 8, pt. 1, p. 31. 9 pages.
- SOME NOTES ON HYDRAULICKING AND GROUND SLUICING IN NEW ZEALAND, AND COMPARISONS WITH THE DRIFT GRAVEL OF THE CORINNA DISTRICT IN TASMANIA.** By E. M. Thornley. T. Au. I. M. E., vol. 4, p. 50. 6 pages.
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- HYDRAULICKING PLATINUM DEPOSITS IN BRITISH COLUMBIA** J. C. M. I., vol. 13, p. 313. 5 pages. I.
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- TIN SLUICING IN TASMANIA.** By E. Edwards. M. & M., vol. 31, p. 309. 12 columns. I.

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- DREDGING FOR GOLD.** Min. Mag, London, vol 2, p. 217. 7 columns I.
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- GOLD DREDGING AS AN INVESTMENT.** By A. C. Ludlum E & M J., vol. 85, p. 315. 2 $\frac{1}{2}$  columns.
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- CLAY CUTOFF, ISABEL DREDGE.** By W. B. Winston Min & Sci. Press, vol. 101, p. 838. 3 $\frac{1}{2}$  columns I
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GOLD DREDGING ON THE CHOCO RIVER, REPUBLIC OF COLOMBIA, SOUTH AMERICA By H. G. Granger. T. A. I. M. E., vol. 39, p. 392. 27 pages I.

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**A CALIFORNIA DÉBRIS DECISION.** E. & M. J., vol. 85, p. 408. 1½ columns.

**DÉBRIS CONTROL IN THE SACRAMENTO VALLEY.** By A. D. Foote. Min. & Sci. Press, vol. 99, p. 688. 2½ columns. I.

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**MAXIMUM RECOVERY OF COAL, GEORGES CREEK REGION.** By H. V.

Hesse. M. & M., vol. 29, p. 373. 11½ columns. I.

**MINING METHODS FOR MAXIMUM RECOVERY OF COAL.** By H. V. Hesse. E. & M. J., vol. 87, p. 303. 18½ columns. I.

**LOSS OF COAL IN MINING FLAT SEAMS.** E. & M. J., vol. 86, p. 138. 4 columns.

**WASTE OF ANTHRACITE MINING: One-third of Production Sent to Culm Bank.** Coal Mining Supplement, E. & M. J., vol. 88, p. 7. 1½ columns.

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# POWER: STEAM, WATER, ELECTRICITY AND GAS

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**CRUSHING ORE** By M. P. Bass. Min. & Sci. Press, vol. 96, p. 354. 13 columns. I.

**THE MECHANICS OF ORE CRUSHING.** By C. De Kalb. Min. & Sci. Press, vol. 96, p. 155. 2½ columns. I

**CRUSHING BY STAGES** By A. Del Mar. Min. & Sci. Press, vol. 101, p. 614. 2½ columns

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**NOVEL HAND CRUSHING DEVICE** By H. L. Jene. E. & M. J., vol. 87, p. 788. 1½ columns. I.

**BREAKING ORE BY TRIP HAMMER, EL COBRE, CUBA.** M. & M., vol. 31, p. 451. I.

**ECONOMY OF POWER IN CRUSHING ORE.** By E. A. Hersam. Min. & Sci. Press, vol. 95, p. 621. 12 columns.

**THE CALCULATION OF THE COMPARATIVE EFFICIENCIES OF CRUSHING AND GRINDING MACHINES.** By R. W. Chapman. T. Au. I. M. E., vol. 13, p. 154. 4 pages. I.

**ON TESTING REDUCING MACHINERY.** By F. D. Power. T. Au. I. M. E., vol. 2, p. 81. 3½ pages

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**THE RISE AND FALL OF DRY CRUSHING ON THE HAURAKI GOLDFIELD.** By P. Morgan. T. Au. I. M. E., vol. 9, p. 161. 15 pages.

**PRACTICAL NOTES ON DRY CRUSHING MILLS IN WESTERN AUSTRALIA** P. C. M. & M. Soc. S. A., vol. 10, p. 222. 5 columns.

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**REDUCTION OF ORES IN THE BARBERTON GOLDFIELD, SOUTH AFRICA.** P. C. M. & M. Soc. S. A., vol. 10, p. 130. 2 columns.

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**"BATTLE-BOX" FOR CLEANING FINE BARITE.** T. A. I. M. E., vol. 40, pp. 731 and 732. I.

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**NOTES ON FEEDERS WITH A DESCRIPTION OF A NEW DRIVING DEVICE.** By D. J. Pepler. P. C. M. & M. Soc. S. A., vol. 8, p. 42, 3 columns, I.; p. 85, 1½ columns, p. 146, 3½ columns, I.; p. 182, 2½ columns.

**THE HUNTER ORE FEEDER.** P. C. M. & M. Soc. S. A., vol. 5, p. 9. 1½ columns. I.

**AN IMPROVED BUFFER FOR ORE FEEDERS: Stamp Milling.** By T. White. T. Au. I. M. E., vol. 5, p. 118. 1½ pages. I.

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**CAPACITY OF CRUSHERS.** Min. Mag., London, vol. 2, p. 45. 3 columns.

**STONE BREAKERS FOR DRY CRUSHING.** T. Au. I. M. E., vol. 6, p. 47. 3 pages.

**THE EFFICIENCIES OF CRUSHERS.** By R. W. Chapman. M. & M., vol. 30, p. 413. 2 columns. D.

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**THE NEW COCHRAN CRUSHER.** By J. T. Barkew. E. & M. J., vol. 88, p. 264. 4 columns. I.

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- THE TUBE-MILL CIRCUIT AND CLASSIFICATION.** By G. O. Smart P. C. M. & M Soc S. A., vol. 10, p. 282, 11½ columns, I; p. 452, 8½ columns, I.; p. 397, 8 columns, I.
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- NOTES ON SOME RECENT IMPROVEMENTS IN TUBE MILL PRACTICE.** By K. L. Graham. P. C. M. & M. Soc. S. A., vol. 7, p. 317, 8 columns, I.; p. 368, 6 columns, I.; vol. 8, p. 18, 3 columns; p. 51, 2 columns; p. 78, 5½ columns.
- THE COMPUTATION OF THE CRUSHING EFFICIENCY OF TUBE MILLS.** By S. H. Pearce and W. A. Caldecott. P. C M. & M Soc S. A., vol. 7, p. 72, 4½ columns, p. 120, 4 columns, D.; p. 207, 8½ columns; p. 265, 7 columns, D.; p. 289, 1 column.
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- A LABORATORY COMPARISON OF TUBE MILL PEBBLES.** By G. H. Stanley. P. C. M & M Soc. S. A., vol. 8, p. 376. 4½ columns. I.
- TUBE MILL CRUSHING IN CONNECTION WITH CYANIDING SLIMES.** By E. B. Wilson. M. & M, vol. 29, p. 8. 5½ columns. I.
- See also **CYANIDING GOLD AND SILVER. TUBE MILLS.** P. C. M. & M Soc. S A., vol. 8, p. 235. 1 column.
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- TUBE MILL PRACTICE.** By W. R. Dowling P. C M. & M Soc. S. A., vol. 6, p. 308, 13½ columns; p. 369, 12 columns, I., p. 12, 1½ columns; p. 44, 2 columns, p. 74, 3½ columns.
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- THE HARDINGE CONICAL PEBBLE MILL** By H. W. Hardinge. M. & M, vol. 29, p. 160 3 columns. I
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- LINING FOR TUBE MILL.** Min & Sci. Press, vol. 95, p. 466. ½ column. I.
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**A SAND TANK SAMPLER.** By H. W. MacFarten. Min. & Sci. Press, vol. 97, p. 636.  $\frac{1}{2}$  column. I.

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**MINE SAMPLING AND CHEMICAL ANALYSIS OF COALS TESTED AT THE UNITED STATES FUEL-TESTING PLANT, NORFOLK, VIRGINIA.** By J. S. Buttows. U. S. G. S., Bull. 362. 23 pages. 1908.

**THE IMPORTANCE OF UNIFORM AND SYSTEMATIC COAL MINE SAMPLING.** By J. S. Buttows. U. S. G. S., Bull. 316, p. 486. 32 pages. I. 1906.

**SAMPLING AT COAL MINES.** M. & M., vol. 31, p. 91. 1 column. I.

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BELL-CRANK LEVER SYSTEM OF SIG-NALING IN RAND MINES E. & M. J., vol. 85, p. 393. Note.

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## SURVEYING

## Methods of Surveying

ON MINING SURVEYS. By A. Beau-lands. Min. Mag., vol. 9, p. 337. 3 pages.

THE PRACTICAL MINER'S GUIDE. A Means of Calculating Distances on Inclines and Distances to Raise and Drift; Surveying. Min. Mag., vol. 9, p. 31, 4 pages, I, Table; p. 121, 33 pages, I; p. 197, 16 pages; p. 293, 4 pages, Table; p. 391, 11 pages, Tables; vol. 8, p. 260, 8 pages; p. 355, 6 pages; p. 460, 4 pages, D; p. 508, 18 pages.

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SEPARATE LEAF SYSTEM FOR RECORDING SURVEY NOTES. By L. Fraser. E & M. J., vol. 88, p. 1268. 5 columns. D.

SURVEYING THE PUBLIC LAND OF THE UNITED STATES. By H. W. MacFadden. Min. & Sci. Press, vol. 100, p. 189. 8 columns. D.

PLOTTING COORDINATE SURVEYS. By J. J. Bristol. Min. & Sci. Press, vol. 100, p. 487, 8 columns, I; p. 524, 7½ columns, I.

See also SURVEYING INSTRUMENTS and SURFACE SURVEYS.

## Surveying Instruments

A FEW OBSERVATIONS ON MINE SURVEYING AND SURVEYING INSTRUMENTS. By R. Provis. T. A. I. M. E., vol. 3, p. 171. 12 pages.

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**Magnetic Surveys**

**MAGNETIC DECLINATION IN THE UNITED STATES.** By H. Gannett U. S. G. S., 17th Ann. Rept., pt. 1, pp. 203-440 1895-96 I

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**Surface Surveys: Claims, Etc.**

**A TRIANGULATION STATION.** By L. Fraser E. & M. J., vol. 87, p. 1124 1½ columns. I.

**A DURABLE TRIANGULATION STATION** M. & M., vol. 31, p. 23 ¼ column. I.

**TRIANGULATION AND SPIRIT LEVELING.** By H. M. Wilson and others. U. S. G. S., 18th Ann. Rept., pt. 1, pp. 131-422, 1896-97; 19th Ann. Rept., pt. 1, pp. 145-408, 1897-98; 20th Ann. Rept., pt. 1, pp. 211-530, 1898-99; 21st Ann. Rept., pt. 1, pp. 205-582, 1899-1900.

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**CONTOURING ON MINING PROPERTIES WITH THE AID OF THE TACHEOMETER.** By H. P. Scale. T. A. I. M. E., vol. 6, p. 62. 24½ pages. I.

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**TOPOGRAPHIC ENGINEERING.** By W. D. Blackburn. E. & M. J., vol. 87, p. 997. 3 columns.

**A BALLOON SURVEY** By W. S. Weeks. E. & M. J., vol. 87, p. 1079 1½ columns. I

**SURVEY OF THE NORTHWESTERN BOUNDARY OF THE UNITED STATES, 1857-1861** By M. Baker U. S. G. S., Bull. 174. 78 pages Map. 1900.

**SURVEY OF THE BOUNDARY LINE BETWEEN IDAHO AND MONTANA FROM THE INTERNATIONAL BOUNDARY TO THE CREST OF THE BITTERROOT MOUNTAINS** By R. W. Goode U. S. G. S., Bull. 170. 67 pages I 1900

**LOCATION AND SURVEY OF RESERVOIR SITES.** By A. H. Thompson. U. S. G. S., 12th Ann. Rept., pt. 2, pp. 1-212. 1890-91. I.

**COMPENSATING GRADES FOR MINE RAILROAD SIDINGS.** By R. D. N. Hall. M. & M., vol. 31, p. 768. 2 columns.

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**TONNAGE ESTIMATION IN DUMPS, OPEN-CUTS, ETC.** E. & M. J., vol. 87, p. 1011. 3 columns.

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**MODERN METHODS IN MINE SURVEYING.** By H. W. Gastrell. T. A. I. M. E., vol. 13, p. 194. 16 pages I.

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**SURVEYING AND MAPPING IN THE GRANBY MINES** J. C. M. I., vol. 11, p. 403. 1½ pages.

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COLLIERY SURVEY NOTES. By R. Shumway. M. & M., vol. 31, p. 61. 1½ columns. I.

SURVEYING AT LITTLE COLLIERY. By J. H. Hærtter. M. & M., vol. 29, p. 108. 5½ columns. I.

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STOPE MEASUREMENTS. By O. S. Townesen. P. C. M. & M. Soc. S. A., vol. 10, p. 13, 1½ columns; p. 63, 3½ columns, I.; p. 105, 2 columns; p. 140, 2½ columns, I.; p. 369, 7½ columns.

TUNNEL SURVEY IN AN ANTHRACITE COLLIERY. By D. P. Jones. E. & M. J., vol. 89, p. 881. 2½ columns. I.

UNDERGROUND CURVES. E. & M. J., vol. 89, p. 1149. 1 column. I.

See also MINE ROADS, TRACKS, ETC.

A DISCUSSION OF MINE CURVE PROBLEMS. By J. E. Tiffany. E. & M. J., vol. 86, p. 230. 12½ columns. I.

CONTOUR MAPS OF ORE-BODIES. M. & M., vol. 29, p. 343. ½ column. I.

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### Shaft-Plumbing

PLUMBING A DEEP SHAFT. Min. & Sci. Press, vol. 95, p. 427. 1½ columns.

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## TRANSPORTATION

### Methods of Transportation

TRANSPORTATION. By R. Reford. J. M. Soc. N. S., vol. 12, p. 23. 34 pages.

COAL MINE TRANSPORTATION. By E. B. Wilson. M. & M., vol. 31, p. 408. 3½ columns. I.

See also HAULAGE SYSTEMS.

TRANSPORTATION IN NICARAGUA. T. A. I. M. E., vol. 41, p. 602. 2 pages.

TRAVEL IN COLOMBIA. By C. De Kalb. Min. & Sci. Press, vol. 98, p. 350. 4 columns. Map.

PNEUMATIC TRANSPORTATION OF COAL. E. & M. J., vol. 89, p. 674. ½ column.

See also COMPRESSED AIR IN MINING.

HINTS TO ORE SHIPPERS. By S. E. Bretherton. Min. & Sci. Press, vol. 101, p. 530. 5½ columns.

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### Portage, Packing and Fluming

PORTAGE IN THE BOLIVIAN TIN MILLS. E. & M. J., vol. 90, p. 1054. ½ column.

PACKING 13,000 FEET OF STEEL CABLE OVER A MOUNTAIN TRAIL. E. & M. J., vol. 86, p. 672. 1 column. I.

TRANSPORTATION BY ANIMALS IN MEXICO. E. & M. J., vol. 88, p. 680. 1 column.



MULE-BACK TRANSPORTATION OF SECTIONALIZED MACHINERY. By F. C. Roberts and W. W. Brady. Min. & Sci. Press, vol. 98, p. 751. 9½ columns. I.

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TRANSPORTATION OF COAL BY FLUME. By R. M. Magraw. M. & M., vol. 30, p. 236. 6 columns. I.

TRANSPORT OF MACHINERY IN MOUNTAINOUS COUNTRIES. By H. H. Kress and A. S. Cameron. Min. & Sci. Press, vol. 95, p. 471. 2 columns. I.

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### Transportation by Rail

ALLOTMENT OF CARS ALONG THE CHESAPEAKE AND OHIO RAILWAY COMPANY. M. & M., vol. 29, p. 400. 1 column.

METHOD OF COAL CAR ALLOTMENT USED BY CAR ALLOTMENT COMMISSION OF THE NORFOLK AND WESTERN RAILWAY COMPANY. By W. A. Jenks. M. & M., vol. 29, p. 470. 1½ columns.

MINE INSPECTION FOR CAR ALLOTMENT. By H. B. Douglas. M. & M., vol. 30, p. 92. 3½ columns.

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COAL DISTRIBUTION AND THE OWNERSHIP OF COAL CARS. E. & M. J., vol. 86, p. 623. 1 column.

SOME PHASES OF THE AMERICAN RAILROAD PROBLEM. By S. Fish. Sch. Mines Quart., vol. 29, p. 1. 14 pages.

LIGHT RAILWAYS. By A. Campbell. T. A. I. M. E., vol. 2, p. 85, 13 pages. I.

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M. J., vol. 87, p. 712. 4 columns. Map.

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A EUROPEAN ELECTRIC COLLIERY RAILWAY. By J. B. Van Brussel. E. & M. J., vol. 89, p. 378. 5½ columns. I.

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COPPER RIVER AND NORTHWESTERN RAILROAD, ALASKA. By L. W. Storm. E. & M. J., vol. 90, p. 77. 8½ columns. I.

AN ORE TRANSPORTING RAILWAY IN THE PYRENEES. By A. Gradenwitz. E. & M. J., vol. 87, p. 1119. 7 columns. I.

A NEW ARIZONA-SONORA RAILROAD. E. & M. J., vol. 90, p. 368. 3 columns. Map.

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STEEL RAILS FOR PRESENT SERVICE: Their Manufacture and Their Failures. By P. H. Dudley. J. W. Soc. E., vol. 13, p. 471. 17½ pages. I.

ON THE DURABILITY OF RAILROAD IRON. By W. Truran. Min. Mag., vol. 4, p. 248, 10 pages, vol. 5, p. 291, 2 pages.

STANDARD RAIL SECTIONS AND FISH BAR JOINTS. By W. R. Jones. P. E. Soc. W. Pa., vol. 3, p. 33. 21 pages. I.

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**A RELIABLE STEEL RAIL AND HOW TO MAKE IT** By J. E. York. T. A. I. M. E., vol. 40, p. 341. 13 pages. I.

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### **Wagon Roads, Wagons and Trac- tion Engines**

**ROAD RESISTANCES** By C. E. Morrison. Sch. Mines Quart., vol. 29, p. 159. 19 pages. I.

**MACADAM ROADS AND THEIR PRESER-  
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**SPECIFICATIONS AND NOTES ON MAC-  
ADAM ROAD CONSTRUCTION** By A. N. Johnson. J. W. Soc. E., vol. 13, p. 767. 25 pages.

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**FREIGHTING ORE WITH BIG STRING  
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**ROAD DISTANCES IN NEVADA.** Min & Sci. Press, vol. 95, p. 748.  $\frac{1}{2}$  column.

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**TRANSPORTATION FACILITIES IN ALAS-  
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## WATER

## Source and Supply of Water

**AMOUNT OF FREE WATER IN THE EARTH'S CRUST.** M. & M., vol. 29, p. 539.  $\frac{1}{2}$  column.

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## INDEX

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It has been found impracticable to index all subjects considered in the references given in this work, but it is hoped that the present index will prove to be amply exhaustive to give ready access to any desired information.

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